Abstract (English)

International student mobility has been steadily increasing over the last twenty years. So have the number of studies analysing the factors influencing decision-making and destination choices of international students. The role of language has been recognised as a driving force in international students' educational choices at both macro and micro levels. Macro level studies, focused on countries rather than individuals, have largely addressed shared and most popular languages. Whereas investigating language seen by individuals as a desired outcome of study abroad programmes has been the main interest of micro level studies. This thesis aims to expand on the role of language as both a macro and micro factor in directing international student mobility first by focusing on the influence of language proximity on international student flows for full degree/diploma programmes, and second by analysing how individual foreign language skills impact students' short-term study abroad aspirations and destination choices.

The macro-level results demonstrate that language proximity does play an important role in driving international student flows. The micro-level findings, in turn, indicate that students who evaluate their foreign language skills as advanced and who speak a foreign language on a daily basis are more likely to aspire to study abroad in comparison to students who assess their skills at an intermediate level and use a foreign language weekly or monthly. The number of foreign languages students master does not seem to impact students' decision-making for joining study abroad programmes. The findings also reveal that students who have decided to participate in study abroad programmes choose the countries with an official language they have knowledge of.

By focusing on both macro and micro level influence of language on international student mobility, the thesis does not only improve our understanding of how language impacts an international student's decision-making and destination choices, but also suggests a way to think about how these two levels can interrelate. Altogether, the thesis stresses the need for further

research into the link between macro and micro language related factors in international student mobility.

Abstract (Italian)

La mobilità internazionale degli studenti è aumentata costantemente negli ultimi vent'anni, così come il numero di studi che analizzano i fattori che influenzano il processo decisionale e le scelte di destinazione degli studenti internazionali. Il ruolo della lingua è stato riconosciuto come una forza trainante nelle scelte educative degli studenti internazionali a livello macro e micro. Gli studi a livello macro, incentrati sui Paesi piuttosto che sugli individui, si sono occupati in larga misura delle lingue condivise e più diffuse. Mentre l'indagine sulla lingua vista dagli individui come risultato desiderato dei programmi di studio all'estero è stato l'interesse principale degli studi a livello micro. Questa tesi si propone di approfondire il ruolo della lingua come fattore macro e micro nel dirigere la mobilità internazionale degli studenti, in primo luogo concentrandosi sull'influenza della vicinanza linguistica sui flussi di studenti internazionali per i programmi di laurea/diploma completi e, in secondo luogo, analizzando come le competenze linguistiche individuali influiscano sulle aspirazioni di studio all'estero a breve termine degli studenti e sulle scelte di destinazione.

I risultati a livello macro dimostrano che la vicinanza linguistica gioca un ruolo importante nel guidare i flussi di studenti internazionali. I risultati a livello micro indicano, a loro volta, che gli studenti che valutano le loro competenze linguistiche come avanzate e che parlano una lingua straniera quotidianamente hanno maggiori probabilità di aspirare a studiare all'estero rispetto agli studenti che valutano le loro competenze a un livello intermedio e che usano una lingua straniera settimanalmente o mensilmente. Il numero di lingue straniere che gli studenti padroneggiano non sembra avere un impatto sulle decisioni degli studenti di partecipare a programmi di studio all'estero. I risultati rivelano anche che gli studenti che hanno deciso di partecipare a programmi di studio all'estero scelgono i Paesi con una lingua ufficiale che conoscono.

Concentrandosi sull'influenza della lingua a livello macro e micro sulla mobilità degli studenti internazionali, la tesi non solo migliora la nostra comprensione di come la lingua

influisca sul processo decisionale e sulle scelte di destinazione di uno studente internazionale, ma suggerisce anche un modo per pensare a come questi due livelli possano essere interconnessi. Complessivamente, la tesi sottolinea la necessità di ulteriori ricerche sul legame tra macro e micro fattori linguistici nella mobilità internazionale degli studenti.

Acknowledgements

This PhD journey has been both a stimulating and challenging process. It required determination, novel knowledge and skills, belief in oneself, encouragement, all of which would have hardly been feasible had I not been surrounded by so many professional, inspiring and supportive people who are my academic advisors and a broader academic community, family and friends, colleagues and peer students. Without them this research may not have commenced, continued and been completed in the end. There are so many words in a language and yet they are not enough to express how truly privileged I feel to have all these people in my life.

I would first of all like to express my sincere gratitude to those who have contributed the most to this research journey – my academic advisors Prof. Elspeth Jones and Prof. Christof van Mol. Their investment into the research was as extensive as one could possibly think of. They seemed to have an answer to every question I asked, a solution to every problem I faced and words of support and encouragement for every moment of doubt. I am truly thankful for their professional guidance in developing and shaping this research, their insightful advice, inspirational discussions and never-ending support. I am also grateful to Christof for giving me greater insight into the field of migration studies.

This research would not have been possible without the encouragement and inspiration I received from Prof. Shlomo Weber. Professor Weber did not only inspire me with the initial idea for this research, encouraged me to apply for the programme but also supported me both emotionally and professionally at different stages of the research process. My gratitude also goes to my friends and colleagues Denis Davydov and the late Grigoriy Kosenok for their support and assistance with quantitative methods; to Seseg, Dmitry, and Kristina for being beside me and always prompting me to go ahead. I am thankful to Prof. Tatiana Skopintseva and all my colleagues at the Department of Foreign Languages and Humanities for their openness, curiosity and compromises they were always ready to make knowing from their own experience how time-consuming and demanding a research process could be.

I would like to thank an incredible team at The Centre for Higher Education Internationalisation at Università Cattolica in Milan, namely Prof. Amanda Murphy, Prof. Fiona Hunter, Prof. Hans de Wit for creating and developing the Center I am honoured to have become part of as a student, for being very supportive with my research idea and assisting me both academically and organizationally throughout the PhD journey. I am also grateful to Prof. Fiona Hunter for a special atmosphere at the CHEI seminars that has made me feel at home since the first time I visited the Center, and for her motivational slides that I have always reverted to as sources of inspiration. To Prof. John Dennis, Prof. John Hudzik, Prof. Catherine Montgomery and other members of the CHEI scientific committee for their feedback, timely questions, and recommendations all of which have contributed to how this research unfolded. Thanks also go to Francesca Finotello and Liz Mofatt for letting me properly concentrate on the research process by taking full care of all organisational questions. I am happy to have been studying, learning from and sharing many memorable moments with Liudmila, Dolly, John, Ravi, Amit, Visnja, Malaika, Jerome, Marina, Dawn, Jennifer, Antonio, Lucie and other CHEI students.

And finally, I would like to thank all my big family for always supporting me in all my decisions in life including the decision to pursue the PhD. Their care, love, interest in my research and belief in me sometimes even greater than my own as well as their understanding allowed me to carry out this undertaking and make small but constant progress on the way.

Dedication

The longest period of this research took place during the COVID-19 pandemic period, which took the lives of many brilliant people, including my friend and colleague Prof. Grigoriy Kosenok, who had encouraged me a lot to do this PhD and always supported me with his jokes, stories and professional assistance. I would like to dedicate my research to the memory of Grigoriy.

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However, they are given here for reference.

Chapter 1. Introduction

International student mobility has been steadily growing for the last twenty years, representing twice as many students in 2019 compared to 2007 (OECD, 2021). Students usually engage in international mobility via two main routes – institutional agreements of their home university for short-term studies abroad or by becoming full-time students of a foreign higher education institution. The first type of mobility, also referred to as credit, exchange or short-term mobility, allows students to follow part of their programme at a foreign university while pursuing a degree in their home institution. In 2018, around two hundred thousand students participated in the Erasmus + programme (Eurostat, 2020), one of the most well-known programmes that supports these exchanges.

The other type of mobility, typically referred to as diploma, degree-seeking or long-term mobility, concerns students who conduct their studies full-time at a higher education institution outside their country of origin. In 2020, OECD countries reported 4.4 million international students enrolled in a university, with the highest percentage at the doctoral level (24% of all PhD students studied for a degree outside their country of origin), 14% at the master level and 5% at the bachelor level (OECD, 2022). From a migration perspective, having obtained a degree in the host country, speaking the language and knowing the culture of the country, and having gone through an adaptation period of at least one year during their studies, degree-seeking students are often seen as potential highly-skilled migrants.

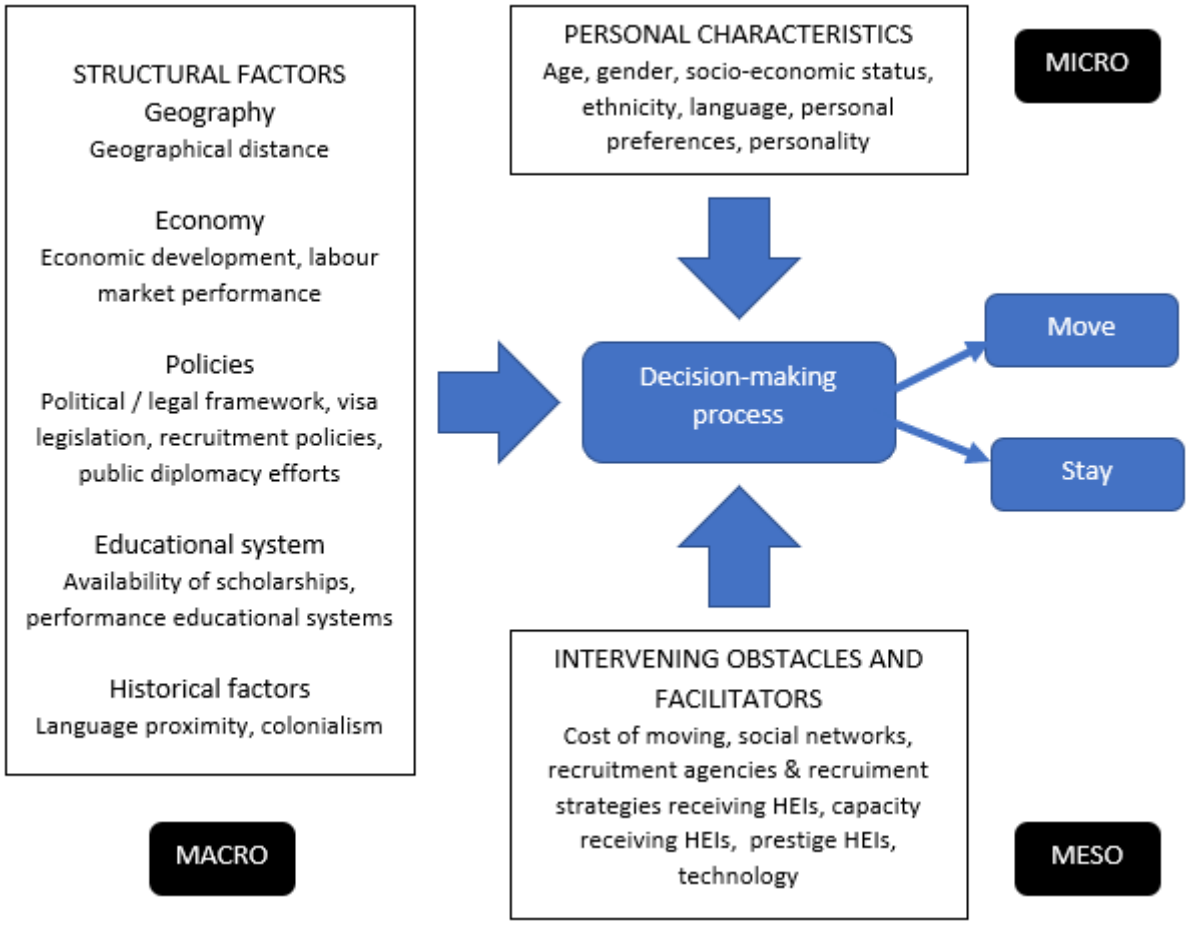
The reasons as to why students engage in studying abroad - here referring to both degree and credit mobility - are varied. For example, they might engage in study abroad programmes either to have access to a better quality education, or improve their career prospects, grow personally and professionally, for travel and leisure purposes, and to enhance their language skills (Castillo Arredondo et al., 2018; King, 2002; Perez-Encinas et al., 2020). These are just a few motives why students aspire to go abroad. Although their needs and motivations may vary depending on the type of mobility, country of origin and destination, and length of the

programme among other factors, participating in international student mobility generally requires foreign language competences, as this allows students to take courses at a university and communicate in real life situations beyond the university campus.

Indeed, language can be considered as both a desired outcome and a means by which studying abroad is carried out. Consequently, competence in another language is an important factor for foreign educational opportunities. As mentioned in the Communication from the Commission on achieving the European Education Area by 2025, both foreign language learning and learning mobility should be promoted as they help reach quality education. At the same time, learning mobility depends on one's linguistic background as "being able to speak different languages is a condition for studying and working abroad" (European Commission, 2020, p. 6). Consequently, language competences can both facilitate and hamper study abroad aspirations and influence destination choices. It is of special note that although language competence is fundamental in influencing international students' aspirations, the existing literature largely focuses on language skills as an outcome of study abroad programmes.

Personal factors and motivations, institutional characteristics, as well as policies implemented at a country level all form part of a complex decision-making process international students go through. First, personal motivations and factors related to family background, peer recommendations, personal goals and barriers including those connected to language, come into focus at the micro level. Second, institutional characteristics such as the study programmes offered at the destination university, the language of instruction and others are generally the focus of meso-level analyses. Finally, adopted policies, political, historic and economic ties with other countries, geographical location and other country related characteristics including official and most common languages spoken, constitute the backbone of most macro-level studies on international student mobility. This complexity of international student mobility decision-making processes is depicted in figure 1 (Van Mol et al., in press).

Figure 1. The complex international student mobility decision-making process of higher education students



Source: Van Mol et al., in press

These factors in all their multitude do not independently impact an international student's decision to study abroad and their destination choices, but rather intersect and influence each other both directly and indirectly. Language as a factor driving international student mobility also works through these three levels. For example, the language policy of a country is related to how many and what languages are taught in schools. Having studied a language previously might influence which study abroad destinations students consider. Similarly, having a mother tongue of a higher communicative value, i.e. languages with high numbers of first and second language speakers (de Swaan, 2001), may be inversely related to a student's motivation to learn other languages. This may affect student outflows in those countries which have a higher

communicative value official language. Lack of language skills may deter students from participation in study abroad, or cause them to choose countries where the same language is spoken.

In addition to differences between languages based on their communicative value, languages can also be compared based on their grammatical, lexical, phonetic and syntactic properties. Language proximity, which shows how similar or distant languages are, is calculated based on similarities of these linguistic parameters. Network analysis of international student mobility reveals that poles or clusters of student flows are associated with cultural and language links within each group (Barnett et al., 2016; Börjesson, 2017).

Existing literature also suggests that in addition to shared and most popular languages, some students prefer to go to countries which are linguistically and culturally close to their own (Goodman et al., 2008; Kingeski & Nadal 2020). When moving to another country, adaptation can be facilitated if a student speaks the local language or when the language is similar to that of a student's home country, as this allows them to acquire the language more easily. This can then contribute to social and psychological well-being and facilitate integration in a host country, both at the higher education institution and in broader society (Chiswick & Miller, 2007; Yang et al., 2016; Wilczewski et al., 2022) Consequently, focusing only on the role of shared and most popular languages in attracting international students may not reflect all possible influences of language.

Given the importance of language in international student mobility, this dissertation aims to address the overarching research question

- **What role does language play as a driver of international student mobility?**

by focusing on two subquestions

- Does language proximity influence destination choices of degree-seeking international students at the macro level?

- What role do individual foreign language skills play in international students' aspirations and destination choices?

To address these research questions two studies have been conducted, which can be found in Chapters 3 and 4. First, a macro-level analysis of degree-seeking student flows among 21 countries of the European Economic Area (EEA) seeks to improve our understanding of the influence of official languages on students' destination choices. Second, the analysis is developed at the micro level, to better grasp individual decision-making, and in order to elaborate the influence of official languages according to which languages students have knowledge of. The micro-level study of short-term international students also seeks to complement and provide a better understanding of macro-level trends.

The empirical part of this dissertation is based on two papers, each of which is framed within different research questions reflecting the macro/micro dimensions, has its own literature review and has been conducted within its own conceptual framework. To unite these two studies, the thesis begins with a more comprehensive literature overview. This discusses overarching concepts of both macro and micro level analysis and introduces Coleman's boat as a general conceptual framework of the thesis which aims "to serve as a cognitive tool" (Ylikoski, 2016) to consider the interrelation between the role of language as a macro and micro factor in international student mobility. Each of the studies presented in Chapters 3 and 4 is preceded by a brief introduction which explains the motivation behind both analyses. The discussion chapter seeks to link the findings of both studies and analyse them via the general theoretical framework of the thesis. Chapter 6 draws conclusions and suggests recommendations and areas for future research. The thesis concludes with my personal reflections as a researcher.

Chapter 2. Literature Overview

2.1 Introduction to the Literature Overview

The aim of this thesis is to improve our scientific understanding of the role that language plays as both a macro and micro factor in driving international student mobility. With this aim, two studies have been conducted. The first focused on the macro-level, investigating the influence of language proximity in driving international student flows for longer-term programmes. The second study provided a deeper insight into the role of individual foreign language skills in study abroad aspirations and destination choices. Each of these studies includes a specific literature review, as can be seen in Chapters 3 and 4. The current chapter, then, seeks to unite both studies by introducing the main overarching concepts guiding the PhD thesis as a whole, and illustrating how both studies complement each other.

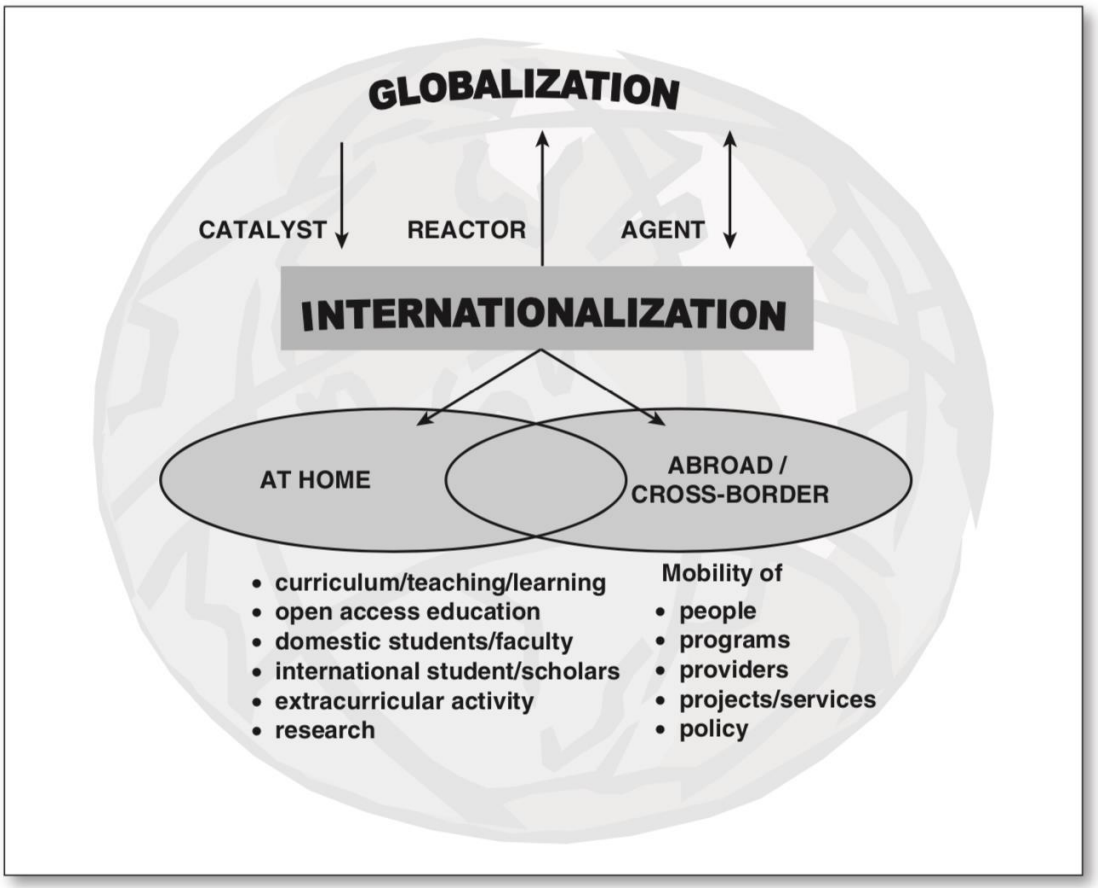
This chapter comprises seven main sections. Section 2.2 defines international student mobility, types of mobility and categories of international students. Section 2.3 reviews different approaches to language in the fields of international higher education and international migration, and subsequently introduces the concept of linguistic proximity. Section 2.4 enlarges on the previous one by discussing different language classifications. Section 2.5 focuses on the overall documented macro, meso, and micro level factors driving international student mobility, whereas Section 2.6 elaborates specifically on the role of language as a driver of international student mobility. Section 2.7 introduces the conceptual framework that unites the two studies. Finally, Section 2.8 summarises the key concepts of the thesis that are also used in the two studies in Chapters 3 and 4.

2.2 International Student Mobility and International Students

Over the past two decades there has been increasing acknowledgment that the internationalisation of higher education is not confined to international student mobility, leading to concepts such as ‘internationalisation-at-home’, ‘inclusive internationalisation’, ‘internationalisation of the curriculum’, ‘internationalisation for all’ and ‘comprehensive

internationalisation', whereby HEIs try to incorporate internationalisation for all students within the home institution. Nevertheless, international student mobility remains one of the core elements of the internationalisation of higher education which is illustrated, for example, in the widely cited internationalisation framework of Knight (2012).

Figure 2. Two Pillars of Internationalisation: At Home and Cross-Border



Source: Knight, 2012

According to the definition provided in the UNESCO glossary[1], "internationally mobile students are individuals who have physically crossed an international border between two countries with the objective to participate in educational activities in the country of destination, where the country of destination of a given student is different from their country of origin."

[1] https://glossary.uis.unesco.org/glossary/en/home

Despite a slowdown related to the pandemic in 2020, international student mobility has been steadily growing globally for the last 20 years showing an increase of about 5.5% between 1998 and 2019 (OECD, 2021). In line with this global trend, international mobility in Europe has also been on the rise, representing 0.15 million students in 2000 and 0.35 in 2019 (UIS Statistics, 2020).

Traditionally, international student flows have been directed to western countries where the most popular languages such as English, French, Spanish, German, etc are spoken (Kahanec & Králiková, 2011; Lee & Tan, 1984; Maringe & Carter, 2007; Mazzarol & Soutar, 2002; Rodriguez Gonzalez et al., 2011; Wilkins & Huisman, 2011). Börjesson's (2017) poles of student recruitment are all associated with a particular language. In the Pacific/Market pole student flows are mainly directed to English-speaking countries. The French/Iberian pole, characterised by a colonial logic, reveals the importance of French, Spanish, and Portuguese languages in attracting international students. The third pole - Central European – is associated with a proximity logic and centers around Germanic and Slavic languages. Although the Global South to North international student flows remain dominant, intra-regional mobility is getting increasingly popular (Choudaha & Van Mol, 2022; de Wit et al., 2022; Hou & Du, 2020; Kondakci et al., 2018; Wen & Hu, 2019). Mobility within the EU also remains predominant for European students, who increasingly choose one of the other EU countries as a study abroad destination (UIS Statistics, 2020). The rates differ per country, in some of them including Austria, Denmark, Slovakia, Slovenia and the Czech Republic, in 2018 out of each 10 incoming students 8 were from another European country (OECD, 2020). Promoting exchange programmes, attracting talented students from abroad and further increasing the rates of internationally mobile students remain one of the goals set by the EU Council (European Commission, 2020).

Although not necessarily referring to flows across borders in all contexts, the abbreviated term "student mobility" is often used as a synonym for international student mobility (ISM)

(Barnett et al., 2016; Choudaha, 2017; de Wit, 2008; Hou & Du, 2020; King et al., 2010; Lipura & Collins, 2020). If the focus is made on a particular area, such terms as "Intra-European student mobility" (Van Mol, 2013) or "Intraregional mobility" (de Wit, 2008) are also common. In this thesis the term ISM will be used to refer to all kinds of mobility. However, wherever necessary I will distinguish between short-term credit mobility, i.e. students who travel abroad as part of the study in their home institution in the framework of exchange programmes, international scholarships, etc., and longer-term degree mobility, i.e. students who go to a destination country to pursue a degree, or other diploma, at a higher education institution of that country, usually for a period of a year or longer.

These two types of mobility are often treated separately in the literature, as it is expected that they might be driven by different factors. For example, Perez-Encinas et al. (2020) showed that short-term mobile students stress the importance of factors such as social life and academic experience, whereas diploma students focus more often on academic dimensions, future career prospects and living expenses. Degree-seeking mobility is often viewed as a precursor for future high-skilled labour migration. Although the stay rates vary across countries, the number of degree-seeking international students who changed their educational visa to a work permit in destination countries remains quite high. In 2019 it accounted for 57% in the USA, 52% in France, 46% in Italy, and 37% in Japan (OECD, 2022).

Second, as shown by multiple studies, except for the quality of education, which is a significant push factor in attracting international students to a country, both degree-seeking students and migrants tend to be guided by the same factors when deciding on their destination. These factors include higher GDP per capita, presence of immigrants from the home country, lower unemployment rates, and distances, both physical, linguistic and cultural (Adsera & Pytlikova, 2015; Beine et al., 2014; Thissen & Ederveen, 2006). Short-term mobility, on the other hand, is also influenced by the so-called tourist factors in addition to general characteristics of a country. These tourist-related factors include climate, lifestyle, attractiveness of the country,

city and university, attractions and sights (Castillo Arredondo et al., 2018; Kosmaczewska, 2020; Lesjak et al., 2015; Perez-Encinas et al., 2020; Rodriguez Gonzalez et al., 2011). Consequently, short-term mobility is sometimes referred to as educational tourism.

Traditional destinations of choice also differ for credit and degree-seeking international students in Europe. Thus, Spain remains the most popular destination country with short-term students whereas degree-seeking student flows are directed to the UK, Germany and France (Campus France, 2020). Moreover, the choice of a university for a short-term international student may often be limited by exchange agreements of the host university. Furthermore, King et al. (2010) note the differences in the socio-economic profile of credit and degree mobile students. They describe the UK credit mobile students as "disproportionately young, female, white and middle-class, and academic high-achievers" whereas degree-seeking students are characterised by their "parental wealth, predominantly independent-sector school background and personal/family history of travel and international links" (p. 2).

2.3 Language and Linguistic Proximity

Foreign language skills are of central importance for education and communication abroad. Students participating in mobility use their language skills to take courses - either in the official language of the country of destination, or English/another popular language as a lingua franca, and their own language skills may determine their choice of destination country and study abroad aspirations in general. Furthermore, international students use their language competences for communicating in the destination country beyond student life at their higher education institution. Indeed, participation in international student mobility usually requires the knowledge of foreign languages – unless the student moves to a destination country with the same official language.

The languages that a student speaks constitute their personal linguistic capital (Gerhards, 2014). However, languages differ in their communicative value and thus from a communicative as well as a strategic point of view, knowledge of the most widely spoken languages may be

more important than knowledge of the languages spoken by fewer people or used in fewer countries (de Swaan, 2001). The desire to improve the knowledge of the most common foreign languages (according to Eurostat [2021], the languages studied most commonly in the EU are English, Spanish, French, German, and Italian) is one element international students take into account when they decide to participate in study abroad programmes (see e.g. Bell, 2016; Bourke, 2000; Cubillo et al., 2006; Lesjak et al., 2015; Rodriquez Gonzalez et al., 2011). Consequently, some of the papers that consider the language factor conclude that the countries where the most popular languages are spoken generally attract more international students (Kahanec & Králiková, 2011; Lee & Tan, 1984; Maringe & Carter, 2007; Mazzarol & Soutar, 2002; Wilkins & Huisman, 2011).

According to the OECD (2021), the most popular countries with international students in 2019 were the USA, the UK, Australia, Canada, Germany, and France. In addition to that, in the longer term, knowledge of foreign languages has been shown to positively impact earnings and job opportunities (see e.g. Ginsburgh & Prieto, 2011; Fox et al., 2019; Van Mol, 2017). Ginsburgh and Prieto (2011) show that in contrast to Northern Europe where the knowledge of English provides the highest premium, in the countries of Southern Europe knowledge of other foreign languages (French, German, Spanish) also translates into higher returns.

Another example of the importance of language from an economic point of view is the role it plays in study abroad decision-making. The decision to move to a certain country, be it for a short-term study abroad programme or with an intention to get a degree and possibly remain in the country for work, is made on the analysis of costs and benefits. Speaking the language of this country or having to learn or improve the knowledge of the language is one factor the student may consider. The lower the costs, the more likely is the probability to engage in an activity, be it learning a foreign language or moving abroad for study purposes (Becker, 1962, 1975; Sjastaad, 1962). The cost of learning a new language may, among other factors, depend on the similarity between the mother tongue and the studied language (Chiswick & Miller, 2007;

Isphording & Otten, 2014). Both of these studies show that the larger the difference between the languages, the more costly it is to acquire this language.

On the one hand, the role of the English language as a medium of instruction and lingua franca is undeniable in driving international student mobility (Waters & Brooks, 2021). Some students aspiring to study abroad see "studying in a language other than English" as one of the most serious barriers to mobility (Doyle et al., 2010). Not only not having courses in English but also not feeling confident in one's foreign language proficiency often deters students from moving abroad (Beerkens et al, 2016; Findlay et al., 2006; Van Mol & Timmerman, 2014). On the other hand, despite the obvious communicative value of English some students say they would have preferred to be able to speak the official language of the country outside the university classes, as aspiring to enhance the knowledge of this foreign language was one of the motivations to study abroad (Bell, 2016).

During study abroad programmes students are exposed not only to the language of instruction, but also to the language of the country more widely. Speaking a foreign language is not simply about communication, but also offers a different degree of immersion into the culture of a destination country. Among the reasons behind learning a foreign language, in addition to such factors as "Because the language is widely spoken around the world", "To understand what life is like for people in other countries" etc., some Europeans say they choose to learn a particular language "Because of the culture associated with the language" (Special Eurobarometer, 2006, p. 44). The importance of knowledge of a foreign language for the cultural integration of a mobile student can be expressed by the following feedback of a Finnish student in Korea.

> It's not necessary, but it makes this so much easier if I know Korean when I work with them, [...] because language is also a part of the culture, and that makes so I understand

them better, not only the words but why they behave like they behave. (Mitchell & Güvendir, 2021, p. 14)

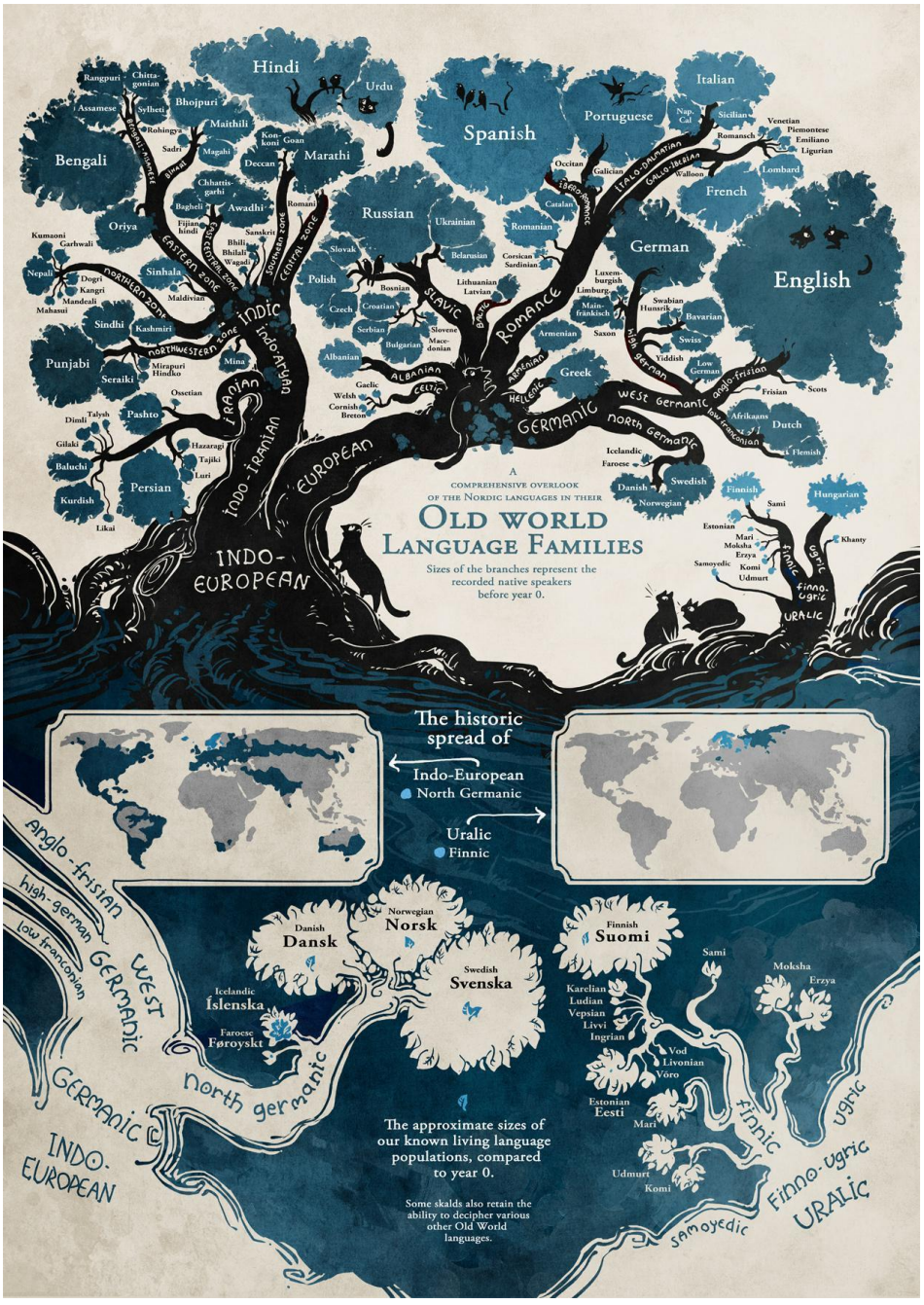
2.4 Language Classifications

Languages are complex phenomena that differ in syntax, morphology, phonology, grammar, vocabulary, and so on. Analysing similarities and differences of these aspects of languages can lead to a better understanding of the history of a language, and can be used to measure the degree of relatedness between them. Such a comparison is a daunting task and requires an analysis of different levels of linguistic structure.

One kind of classification that includes the analysis of grammar, lexical, phonetic and syntactic similarities is a genealogical classification which shows the relationship between languages from a historical perspective. In this classification, language families are divided into branches, groups and subgroups of related languages. Each stage of fragmentation unites closer languages in comparison with the previous, more general one. Thus, the East Slavic languages show a greater proximity than the Slavic languages in general, and the Slavic languages show a greater proximity in comparison with other Indo-European languages. This information, often presented as a tree, can be used to compute distances between languages (Currently, the most comprehensive source of the genealogical classification of languages is Ethnologue[2]). The following graphic image is one example of the relationship between languages in the Indo-European group.

[2] https://www.ethnologue.com

Figure 3. The relationship between languages in the Indo-European group



Source: The Guardian[3], accessed October, 2022

For the application of this approach on international migration flows see, for example, Adsera and Pytlikova (2015) who constructed the index of linguistic proximity based on the information from Ethnologue. The index takes the value from 0 to 1 depending on the number of

[3] https://www.theguardian.com/education/gallery/2015/jan/23/a-language-family-tree-in-pictures

levels (branches, groups, subgroups of the language family) the languages share. Despite not directly referring to the genealogical classification of languages, Börjesson's (2017) poles of international student mobilities can also be described in terms of language groups. The countries of the Pacific/Market pole centre on English as a global language, the French/Iberian pole encompasses French, Spanish and Portuguese languages, and the Central European pole is based around German and Slavic languages.

A different classification is based on the phonetic structure of the compared languages. Comparative phonetics is the principle on which the so-called Levenshtein distances are based. Levenshtein (1966) suggested an algorithm that calculates the number of phonetic alterations required to change the word from one language to another and thus determine the distance between languages. Although this approach was not developed by a linguist but by a mathematician, it is quite often used as a measure of language proximity, along with the influence of such proximity on the drivers of migration and student mobility, due to its easy applicability and broad coverage of languages (see e.g. Baláž et al., 2017; Isphording & Otten, 2014).

Lastly, when comparing languages, historical analysis of the similarities and differences in the vocabulary of two languages plays a very important role. The lexico-statistical approach is based on analysing words that historically belonged to the language, such as numerals (up to ten), words denoting parts of the body, names of some animals, plants, tools, and so on. This therefore excludes possible borrowings as a result of migration and contacts with other languages. The classification was developed by linguists (Dyen et al., 1992) at the end of the 20th century. In contrast to the genealogical classification for which distances have to be decided in case of each particular analysis, the distances based on a lexico-statistical analysis have also been imputed by Dyen et al. (1992), though only for Indo-European languages. (For the application of language proximity based on this approach in analysing the role of language on the drivers of international migration see Adsera & Pytlikova, 2015; Belot & Ederveen, 2014).

2.5 Drivers of International Student Mobility

The number of studies analysing factors, aspirations, and destination choices of international students has also been rising in recent years. Overall, existing studies indicate drivers at three different levels: macro level factors associated with political, economic, and language factors of the home and host countries, meso level factors indicating institution-related aspects, such as the decision to deliver programmes in English or another lingua franca; and micro level factors pointing to individual factors such as socio-economic status, gender and ethnicity. Although this dissertation focuses on the influence of language on international student decision-making and destination choices at the micro and macro levels, the literature review in this section includes all the three levels of analysis. This allows a deeper understanding of the role of language among other determinants of student mobility.

Existing research indicates that at the macro level common languages, colonial relations, geographical proximity and quality of education influence the direction of international student flows (Abbott & Silles, 2016; Beine et al., 2014; Van Bouwel & Veugelers, 2013). International student flows also positively correlate with economic and political connections between countries (Hou & Du, 2020). Abbott and Sillles (2016) add to this list of factors the number of overlapping hours between the capital cities of origin and destination countries and show that a greater time difference is inversely related to student flows between these countries. Rodriguez Gonzalez et al. (2011) also analyse the role of climate in attracting international exchange students. They conclude that this tourism related factor has a positive significant influence on student flows together with other country related factors such as language, cost of living, quality of educational system, and geographical distance. Beine et al. (2014) consider two groups of macro level factors: the factors associated with the cost of mobility and those related to expected earning, education and the so-called attractiveness factors. Baláž et al. (2018) distinguish between economic factors, non-monetary factors and connectivity factors.

The studies that analyse the role of language as a macro factor find, overall, that international student flows are generally directed to countries either with the same language as the one of the home institution, to English-speaking countries, or to countries where other popular languages are spoken (Abbott & Silles, 2016; Beine et al., 2014; Kahanec & Králiková, 2011; Maringe & Carter, 2007; Van Bouwel & Veugelers, 2013). However, as also evidenced in a number of studies (Brown et al., 2016; Goodman, 2008; Kingeski & Nadal, 2020), the influence of language on an international student's destination choice is a more complex phenomenon which is not always limited to the role of shared and popular languages. Some students choose a linguistically and culturally close country as they see it as a way to ease adaptation costs and acquire a foreign language more quickly.

At the meso level, the role of universities comes to the forefront. Quality of education is an important factor influencing international student flows (Van Bouwel & Veugelers, 2013). The level of tuition fees in a destination country also correlates with international student flows (Caruso & de Wit, 2014; Naidoo, 2007). In terms of language, the chosen language of instruction in higher education institutions may influence the decision of an international student to study abroad or the possible destination. The role of English as a medium of instruction is undeniable in driving international student mobility (Waters & Brooks, 2021). Bamberger's (2020) study highlighted an important role English-taught programmes play in attracting international French-Jewish students to an Israeli university.

At the micro level, analysis of mobility drivers focuses on individual factors and motives of international students. At this level, the existing research typically indicates that study abroad aspirations are influenced by social class, cultural and economic background of the family, network effect, race, age and gender (Brooks & Waters, 2020; Findlay et al., 2006; Hurst, 2019; Netz et al., 2020). While individual characteristics are a key element, motivations, expectations, needs and perceived barriers also play a role in study abroad decision-making (Beerkens et al., 2016; Lesjak et al., 2015; Perez-Encinas et al., 2020). Students may aspire to study abroad as

they desire to meet new people, experience living in a new culture, grow personally and professionally, improve their career opportunities (ibid.).

A desire to improve foreign language skills is another popular reason students give for participating in study abroad programmes (Bell, 2016; Bourke, 2000; Castillo Arredondo et al., 2018; Cubillo et al., 2006). At the same time, lack of confidence or competence in a foreign language may deter students from engaging in such international programmes (see e.g. Findlay et al., 2006; Van Mol & Timmerman, 2014). The analysis of reasons that could prevent students from participating in study abroad opportunities by Beerkens et al. (2016) showed that the two most frequently mentioned reasons for non-participation are financial barriers and a perceived lack of language competences. Thus, language and foreign language skills can be both a source of attraction for specific mobility destinations as well as a deterrent to study abroad opportunities when students are less proficient in the destination language. Each of these roles are considered in more detail in the next section.

2.6 Language among the Factors Influencing International Student Mobility

Most of the studies aimed at understanding the role of macro level factors influencing destination choices of international students, considered either the flows to countries that share the same language or flows to countries where the most popular languages are spoken (see e.g. Abbott & Silles, 2016; Beine et al., 2014; Kahanec & Králiková, 2011; Lee & Tan, 1984; Perkins & Neymayer, 2014; Rodriguez Gonzalez et al, 2011). Analysing the flows from developing countries to the USA, the UK and France, Lee and Tan (1984) found the commonality of languages, measured as a dummy variable – English as a first or second language in the home and destination country – to be one of the most important determinants for flows to the USA. The second most significant factor was quality of education. Common language is also one of the important factors that influence flows to the UK, along with geographical distance, staff-student ratio and the share of science-based courses, difference in the cost of living, and the GNP growth rate (Lee & Tan, 1984).

The study of flows to OECD countries by Beine et al. (2014) also found support for the positive influence of a common official language, quality of education, cost of living and the network effect. Abbott and Silles (2016) indicate that the effect of a common language might be especially important for students from low-income countries. They analysed international student flows from 18 origin countries to 38 destination countries, and ran two separate gravity models for the flows from high-income countries and low-income countries. In doing so, they find that although speaking the same language has a significant positive influence in both models, it increases the flows from high-income countries by 211 percent and by 367 percent from low-income countries (Abbott & Silles, 2016).

These results are in line with Wei et al. (2019) whose study showed that students from developed countries tend to be less deterred from mobility aspirations based on whether the same language is spoken between home and destination countries. Kondakci (2011) also notes that rationales including the language factor in the choice of a destination country may be different for students of economically developed and developing countries. Thus, the students of North America and Western Europe indicate "the desire to experience a different culture" as the main reason to choose Turkey as a study destination, whereas students from economically developing countries of the region rely more on economic and academic rationales. The highest number of international students in Turkey comes from Azerbaijan and other countries of Central Asia (group 1), and the Balkans (group 6) (Kondakci, 2011). These two groups are related to Turkey via language links as they either share the common language or belong to the same group or subgroup of Turkic languages.

Hou and Du's (2020) study, devoted to the emergence of new regional hubs and drivers of international student mobility, also demonstrates a significant influence of the same language on the choice of destination country in addition to economic, political, and historical ties. As the authors note, "similar cultural backgrounds and language can shorten the psychological distance between people and reduce the sense of strangeness. Therefore, students from some Asian,

African, and Latin American countries prefer European countries with historical colonial connections and similar languages to their home countries as their study destinations" (Hou & Du, 2020, p. 20).

Nevertheless, conflicting evidence has been presented by Van Bouwel and Veugelers (2013), who did not find a significant influence of a shared language on international student flows. The first reason that may explain these different findings is that the authors focused on different geographical areas. Van Bouwel and Veugelers (2013) analysed mobility within Europe whereas Beine et al. (2014) and Abbott and Silles (2016) concentrated on a wider region by studying flows among OECD countries (18 countries of destination and 38 countries of origin). Another possible difference may lie in the approach to classifying a shared language. As Melitz and Toubal (2014) note, a common official language, a typical way to measure the role of a shared language, may not always reveal the shared language influence as not all the languages spoken in a country have the status of official language. Common native languages as well as common spoken languages may also capture the effect of a shared language. Although both Van Bouwel & Veugelers (2013), Beine et al. (2014) and Abbott and Silles (2016) use the same database for the information about a shared language, only Abbott and Silles (2016) explicitly mention using a dummy of a common spoken language in addition to a common official language.

Not only have the flows between countries with the same language generally been found to be higher, but also the flows to countries where major languages are spoken - English, Spanish, Italian, French, German (Kahanec & Králiková, 2011; Rodriguez Gonzalez et al., 2011). According to the OECD (2021) the most popular countries with international students in 2019 were the USA, the UK, Australia, Canada, Germany, and France. As de Swaan (2001) notes, languages differ in their communicative value (English – hypercentral; Spanish, French, German – supercentral) and thus, from the communicative point of view, knowledge of the most widespread languages may be more important than knowledge of the languages spoken by fewer

people or used in fewer countries, which de Swaan describes as ‘peripheral’. Consequently, the desire to learn or improve the knowledge of foreign languages that possess a high communicative value may prompt students to consider studying in countries in which these languages are spoken. Although there might have been some changes in the centrality and importance of certain languages due to the rising population in some regions such as Africa and the Middle East and the growing importance of China and BRICS countries (ICEF 2019), English keeps its hypercentral role and remains the most spoken and studied language in the world (Ethnologue, 2022; Eurostat, 2021).

In addition, the status of English as a lingua franca and its widespread adoption as a language of instruction is an important pull factor (Altbach, 2007; Kahanec & Králiková, 2011). Bamberger’s (2020) micro-level analysis of international French-Jewish students in Israel highlights the significant role of English as an attraction factor. The interviewed students see the English language as a valuable skill, a way to improve their career opportunities, some saying they might not have decided to study in Israel had the programme been taught in Hebrew. Not having courses in English was also shown to be a deterrent to international mobility among students in New Zealand universities (Doyle et al., 2010). On the other hand, some students participating in a study abroad programme in a non-English speaking country mention not enjoying speaking English outside the university as it prevents them from becoming more fluent in another language – the official language of the country (Bell, 2016).

All the papers mentioned above treated the language factor as a binary variable (a shared language between home and destination countries or whether the language can be considered widespread and consequently be characterised by a high communicative value). An analysis of nursing students’ mobility intentions by Goodman et al. (2008), on the one hand, aligns with the binary approach, in that the study revealed a strong preference for English speaking countries among UK students. However, the other group of students in the same study, from Spanish universities, indicated Italy as the most preferable destination followed by the UK and USA.

Interestingly, one of the explanations put forward by the authors in this case was that Spanish students were not deterred from choosing a country where they do not speak the language since "Italian is one of the easiest languages for Spanish speakers to learn" (Goodman et al., 2008, p. 381). This suggests that the role of language may not simply be limited to a binary measure i.e. whether students speak the destination language or not. It suggests instead that linguistic proximity might also play a role in international students' choice of study abroad destinations.

Similarly, another analysis by Kingeski and Nadal (2020), of the drivers of international student mobility from Brazil to Spain, finds that proximity between the languages and cultures is one of the most important factors in choosing Spain as a destination country. As the authors explain, "the Spanish language represents a more accessible option for studying than a country where English prevails" (Kingeski & Nadal, 2020, p. 102); two-thirds of the respondents planned to study in Spain, and only one-third indicated the UK and the USA as the most desired destinations.

Barnett et al.'s (2016) network analysis reveals four clusters of international student mobility all of which are characterised by language and cultural links influencing the structure of each cluster. The authors do not find the role of language, which they study as a shared language between home and host countries, to be a strong predictor of student flows and note that, as there are many languages spoken in European countries, this might have affected the result. Despite the fact that Wei et al. (2019) also agree that "students studying in countries with similar languages find it easier to communicate, and these similarities reduce cultural shocks and cultural conflicts in the host country" (p. 33), they only use a dummy variable to analyse the language influence on students' destination choices. Their analysis shows a significant positive influence of the shared language on flows from developing to developed countries and a negative influence of a common official language on the flows between developing countries or from a developed to a developing country. One of the explanations put forward by the authors is that

this negative influence might reflect a desire to study another foreign language and experience living in a different culture.

The evidence presented here suggests that there is more to be considered than simply analysing the influence of a shared language or flows to countries in which the most commonly used and studied languages are spoken. Although this binary approach can shed some light on the role of language as a macro factor driving international student mobility, it does not reflect all possible influences of language on the process, and deeper analysis is required, with linguistic proximity apparently playing a role.

Moving to a linguistically close country as well as to a country with the same language can lower monetary and non-monetary costs by reducing the number of hours or minimising the efforts needed to learn the language. Chiswick and Miller's (2007) analysis of language proficiency among immigrants in the US and Canada empirically showed that, when there is greater distance between a native language and the official language of the destination country, the result is a lower level of language proficiency compared to speakers coming from countries which are linguistically closer. It can also facilitate social integration and reduce psychological barriers (Adsera & Pytlikova, 2015).

It is not only the possibility to acquire the language of a destination country more quickly which may correlate with the decision of a student to choose this country for educational purposes, but also the preexisting knowledge of a foreign language, which may have been acquired, for example, at school. The analysis of destination choices of both degree seeking and short-term Korean students showed that although most students still aspire to get a degree in an English-speaking country, they are increasingly moving to neighbouring countries like China for a study abroad programme (Kim & Zhang, 2020). Among international students in China, most come from Korea (Yang & de Wit, 2019), and Chinese remains one of the three most taught foreign languages in school after English and Japanese. The analysis of the influence of compulsory foreign language learning at school on migration flows within the EU showed that

speaking the language of a country positively correlates with migration decisions (Aparcio Fenoll & Kuehn, 2016). As students on short-term mobility programmes participate in the study process for a limited period of time, it may be possible that this affects their study abroad aspirations. For example, it may not simply be a question of speaking or having studied a foreign language earlier, but also how confident they feel in speaking that language, and how well or badly they perceive their language skills (Ovchinnikova et al., under review).

Indeed, not feeling confident in their language skills, and consequently seeing language as a barrier, is one of the reasons students often give for not participating in study abroad programmes. Thus, in the study by Findlay et al. (2006), around 40% of first-year students marked it as a very important reason and 70% as a slightly important reason for not going abroad. It was the second most significant barrier after financial concerns. Seeing language as a barrier is especially typical of non-participants in study abroad programmes (Beerkens et al., 2016). The language issue is less often mentioned by Erasmus participants and the students who considered participating in such programmes in comparison to non-participants: around a third of students from Spain and the Czech Republic and slightly more than a third of students from the UK, Spain and the Czech Republic mentioned this factor as a barrier.

On the other hand, foreign language skills can also be a significant facilitator of study abroad: for example they might lower the 'migration costs' associated with moving to foreign destinations (Isphording & Otten, 2014). Analysing international short-term students' decisions to study in Germany and Spain, Castillo Arredondo et al. (2018) found the significant influence of students' desire to improve their foreign language skills as a reason to participate in study abroad programmes. It was the second and third most popular answer among short-term international students from Nuremberg and Cordoba respectively. Importantly, in both cases German and Spanish were also the language of instruction (Castillo Arredondo et al., 2018).

Enhancing foreign language proficiency has always been one of the most frequently cited motivations to participate in study abroad programmes (Bourke, 2000; Cubillo et al., 2006;

Rodriquez Gonzalez et al., 2011). Bell's (2016) analysis of the expectations and concerns around study abroad programmes based on blog posts of the students before and during mobility showed that students anticipated "greater fluency in a foreign language" as one of the results of studying abroad. Discussing the perceived benefits of study abroad programmes, students at universities in New Zealand ranked highly "exposure to a different culture and language" (Doyle et al., 2010). As Jackson et al. (2021) note, the number of students seeking to elevate their language skills has been growing alongside an overall increase in international student mobility. Consequently, a considerable amount of research has been devoted to the analysis of foreign language proficiency as the outcome of international student mobility. Very few papers, though, have studied the role of individual foreign language proficiency and use on study abroad aspirations and destination choices.

The analysis of the role of foreign language skills in study abroad decision making and destination choices aims to provide a deeper insight into seeing language as a barrier and facilitator of study abroad aspirations by focusing on whether students see their foreign languages as good or insufficient, on how often they speak a foreign language and on how many languages they already know. The combination of these three factors seeks to represent more completely the influence of foreign language skills. Some students may have studied a language at school but have rarely used it since then, which may affect the perception of their skills. A previous foreign language learning experience, i.e. knowing several languages, is positively associated with learning a new one (Gerhards, 2014).

2.7 Conceptual Framework

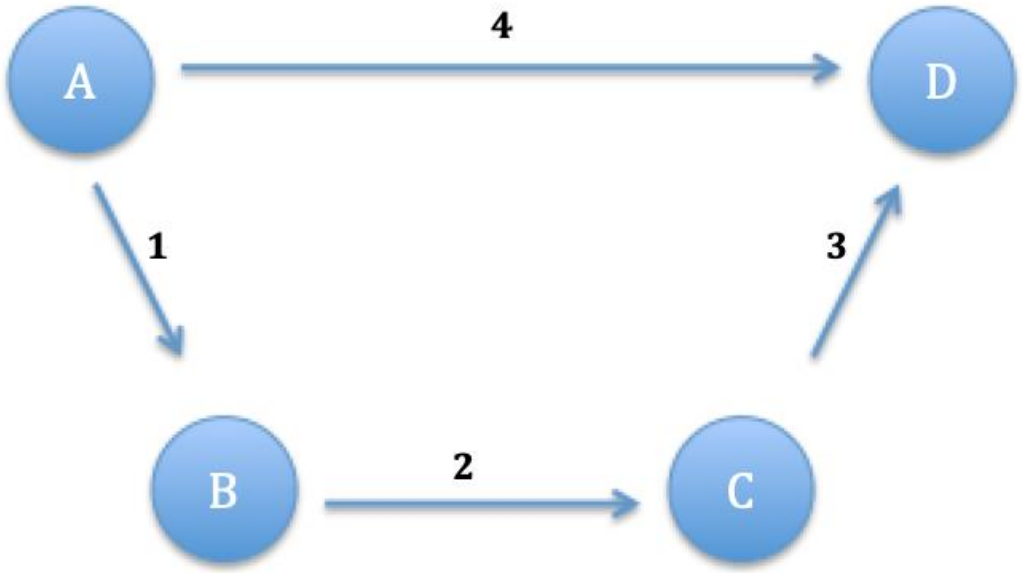
In the previous section it became clear that international student mobility is driven by the factors located at the micro, meso, and macro levels. Although to a significant extent for the sake of simplicity of analysis, factors located at these three levels are often analysed separately, the link between the three can hardly be denied. For example, the decision of a country to increase tuition fees for international students, which is a macro factor, can result in some individuals

being deterred from choosing this country for study abroad purposes – a micro factor (Beine et al., 2017). The opposite is also true. The decision of some people to move abroad, for example, for work-related purposes can eventually result in a growing number of future migrants including students choosing this country as a potential destination due to a network effect. Another example could be an increased demand from students to go abroad to a particular country, which can prompt universities to have cooperation agreements with universities of that country.

This thesis focuses on the role of language as a micro and macro driver of international student mobility. As the analyses into the influence of language at the micro and macro levels were performed separately, each of them relying on a different conceptual framework (rational choice theory and personal investment theory), the Coleman diagram (1986, 1994) is used as a uniting framework to think of and discuss the link between the macro and micro levels.

Coleman's diagram, often depicted in the form of a boat with arrows and nodes (see Figure 4) is a visual representation of how macro-level associations (arrow 4) can be explained through macro-micro-macro level mechanisms (arrows 1, 2 and 3). It is used to illustrate the dynamic interplay between macro-level and micro-level developments.

Figure 4. Coleman's boat



Source: Coleman, 1994, p. 12

We may consider the following example that relates to the topic of this thesis. The language policy of a country (A) seems to be related to the number of students participating in international student mobility. At the same time, the language policy may influence the number of languages spoken in a family (B). Being exposed to several languages may increase the number of countries the students may see as among potential destinations for study abroad opportunities (C). Once a student participates in international student mobility, they thus contribute to the overall flows of the country (D).

International student decision-making has been shown to depend on the reasons located at the country level and individual level. As Brooks and Waters (2020) note, in addition to socio-economic characteristics of a student and their personal needs and motivations to study abroad, a general political and economic climate in a country of origin and destination influences students' aspirations and destination choices. Thus, a growing number of international companies that stress the importance of intercultural competences in their employees may prompt more students to engage in study abroad opportunities with the aim to develop these competences and thus improve their career opportunities. Although the link between macro and micro levels is suggestive, Coleman's boat provides a systematic approach to think of the relations between these two levels.

There is a note in the first published paper of this thesis (see Chapter 3) in the recommendations for future research, "further qualitative and quantitative research of micro-level determinants could help understand the mechanisms behind that (macro-level) association" (Ovchinnikova et al., 2022, p. 9). This is in line with one of the aims of the Coleman diagram as mentioned by Ylikoski (2016),

> sociological explanations that merely connect two macro variables (AD-explanations) are not theoretically satisfactory and need to be supplemented by an account of the micro process underlying them. (Ylikoski, 2016, p. 12)

The diagram is also helpful in pointing out areas that are currently under investigated. As Lipura and Collins (2020) note, despite a growing number of studies into the factors influencing international student mobility, as long as these studies are conducted within different conceptual frameworks that are not linked to one another, this often restricts the overall understanding of international students' aspirations and destination choices.

Being aware of the limitations of these diverse approaches, the findings of the macro factor analysis discussed within the human capital approach (Chapter 3) is complemented by a micro-level study aimed to help us understand the mechanisms behind an individual's decision-making and the influence of socio-cultural context in addition to economic rationales (Chapter 4). Consequently, this research aims to use the Coleman diagram as a tool to comment on the relationship between the variables and unite both studies of the analysis, and thus try to overcome the problem of lack of intersection in conceptual frameworks, disciplines and focuses of studies that typically focus only on macro or micro level factors.

Although the analysis in this thesis does not fully correspond to Coleman's boat as it does not empirically investigate the causal micro-macro and macro-micro relations, connecting micro and macro levels is nevertheless important. With this purpose in mind the Coleman diagram is used to analyse and interpret findings from the two studies in this thesis. First, it allows us to capture the role of socio-cultural context and self-perceived skills in international students' aspirations and destination choices in addition to country related factors. Second, both studies relate to a similar geographical context. The first analysis covers 21 countries of the European Economic Area whereas the second study is narrowed down to two countries of the EEA – the Netherlands and Belgium, and more specifically, to a more linguistically proximate area as the analysis only focuses on the Flemish speaking part of Belgium. Two conceptual frameworks – rational choice theory and personal investment theory – are also brought together to have a deeper insight into the role of language together with other explanatory variables as a driver of international student mobility on both levels of the analysis. Future research may better identify

the link between micro-macro and macro-micro factors, both key elements of the Coleman diagram, to provide a more complete understanding of the nature of the student mobility process.

2.8 Conclusion

This chapter introduced the overarching concepts within the area of the current research. It reviewed the existing literature on the drivers of international student mobility with a focus on the role of language. It defined the key concepts such as language, linguistic proximity, international student mobility, international student and types of mobility. The chapter highlighted several approaches to the role of language in international student mobility (communicative, economic, cultural) and explained several language classifications based on which linguistic proximity can be measured. As this dissertation focuses on the macro and micro level, the literature overview described how and which factors are usually studied at each level. By exploring Coleman's boat, it explained how the analyses conducted at the two levels can complement each other.

The following chapters will go into more detail by discussing some of these key elements through the published papers to answer the research questions in each of the two papers – what is the influence of language proximity in shaping international students flows; and what role do foreign language skills play in the decision making process and destination choices of international students.

Chapter 3. The Role of Language Proximity in Shaping International Student Mobility Flows

3.1 Introducing Paper One

This paper published in *Globalisation, Societies, and Education* (Ovchinnikova et al., 2022) relates to macro level factors and aims to expand the understanding of the role of language as a driver of international student mobility by introducing the concept of language proximity and analysing whether the distance between official languages influences international student flows.

The role of language at the macro level is usually reduced to the analysis of the influence of common languages spoken in the origin and destination countries and most popular languages in attracting international students. However, the following evidence implied the language influence may not be confined to these two elements.

First, anecdotal evidence revealed by the micro level studies of Goodman (2008), Kingeski and Nadal (2020), shows that some students choose their destination countries among other factors based on how easy or difficult it would be for them to learn the language of this country. As empirically demonstrated by Chiswick and Miller (2007), linguistic similarity between home and destination language contributes to faster acquisition of the language of a destination country. The interest in the topic of language proximity also relates to my own observation of how similarity between languages, namely French and Italian, facilitates acquisition of another foreign language. Despite evidence shown in the literature review that the role of language in the choice of destination country for studying abroad can also be influenced by the similarity between one's home country language and the language of a destination country, this influence has not yet been brought to the forefront in macro-level studies, so this article has made an important contribution to the field.

Second, although international students, especially those who decide to study abroad to get a degree, are increasingly viewed as having potential as skilled future labour migrants,

guided by very similar factors in their choice of a potential destination, the role of language in student decision-making is often narrowed down to the language as a medium of instruction. The influence of this meso level factor (i.e. as an institutional choice) is undeniable in increasing international student flows (Waters & Brooks, 2021). However, the stay rate of degree seeking students in the destination country is quite high and even during studying, which is usually at least a year, these students are also exposed to the language of a country in addition to the language of instruction. Therefore, the influence of language on the choice of a destination country might be broader for this category of students than for students participating in short-term mobility. These factors explain the reasoning behind adding the concept of language proximity to other traditional ways of analysing the impact of language, namely, the language of instruction, the common language spoken in home and destination countries and the role of the most popular languages such as English in shaping international student flows.

3.2 The Role of Language Proximity in Shaping International Student Mobility Flows

3.3 Literature Review

3.3.1 Language Proximity as a Determinant of International Student Mobility

3.4 Data and Methods

3.4.1 Data

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3.4.2.3 Control Variables

3.4.3 Analytic Strategy

3.5 Results

3.5.1 Descriptive analysis of international student flows

3.5.2 Gravity models

3.6 Discussion

3.7 Limitations

3.8 Conclusion

3.9 References

GLOBALISATION, SOCIETIES AND EDUCATION
https://doi.org/10.1080/14767724.2022.2070132

Routledge
Taylor & Francis Group

The role of language proximity in shaping international student mobility flows

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ABSTRACT

Many papers on international student mobility have analysed different macro factors influencing the decision making of international students. However, only a limited number of studies have considered the role of language distance on international educational choices. This paper aims to fill that gap by identifying the role of language proximity in international degree seeking student flows among 21 countries of the European Economic Area in the years 2005, 2010 and 2015. Our gravity models reveal a statistically significant influence of language proximity on student flows within these 21 countries. We argue that language proximity simplifies academic, cultural and socio-economic integration of international students in the destination country and as a result makes the process of their adaptation to a new environment easier and smoother. Future research should expand on the mechanisms of that influence.

ARTICLE HISTORY
Received 18 May 2021
Accepted 20 April 2022

KEYWORDS
Language proximity; international student destination choice; international student mobility; international student decision-making process; Europe

Introduction

In line with global trends in international student mobility, the number of intra-European mobile students rapidly increased between 2000 and 2019 (UIS Statistics 2020). Today, international students are the fastest growing group of all international migrants globally (Czaika 2018), with an average annual growth of approximately 6 percent between 1998 and 2017 (OECD 2019). Against this background, international student mobility has become a popular topic for scientific research over the past decade (see, e.g. Abdullah, Abd Aziz, and Mohd Ibrahim 2014; Gumuş, Gok, and Esen 2019; Jing et al. 2020; Lipura and Collins 2020; Ogden, Streitwieser, and Van Mol 2020). The growing number of empirical macro-level studies greatly enhanced our understanding of destination choice of international students, indicating the importance of economic, educational, political, social and geographical factors, both in origin and destination countries, in students' decision-making processes on studying for a degree in another country (see Choudaha and Van Mol [2021] for a recent overview).

One of the factors often included in quantitative models on the determinants of international student mobility flows is 'language'. Unfortunately, however, this factor has mainly been used as a control variable, and has only been poorly theorised so far. Most of the papers that consider the language factor study it either as the same language spoken in home and destination countries (Abbott and Silles 2016; Beine, Noël, and Ragot 2014; Hou and Du 2020; Rodriguez González,

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Bustillo, and Mariel 2011; Van Bouwel and Veugelers 2013) or as whether the language of the destination country can be classified as the most attractive and widely used one, thus explaining why the UK, the US and Australia, as English-speaking countries, are some of the most popular destinations with foreign students (Kahanec and Králiková 2011; Lee and Tan 1984; Maringe and Carter 2007; Mazzarol and Soutar 2002; Wilkins and Huisman 2011). Both the language in common and major languages as a pull factor have been found to have a positive effect on international student flows. Our paper aims to go beyond these findings, by explicitly foregrounding the role of language proximity in destination decisions, focusing on the linguistic distance between the students' home and host countries. The analysis is based on UNESCO Educational Statistics, and in particular international student mobility between 21 countries in the European Economic Area, covering the years 2005, 2010 and 2015.

Literature review

Language proximity as a determinant of international student mobility

In this paper, we start from rational choice approaches to human capital theory (Becker 1962, 1975; Sjastaad 1962). From this theoretical perspective, moving to another country is a form of investment an individual makes. Although moving is costly – in economic and social terms (Massey et al. 1993), it is simultaneously beneficial, as individuals acquire valuable skills and abilities abroad, which increase their human capital. The rational choice approach to human capital, then, expects that individuals will move to locations that provide them the greatest utility at lowest costs. The acquisition of language skills can thereby be considered as an investment in students' human capital. At the same time, language skills are not perfectly portable across international borders, as even between countries with the same official language linguistic differences exist (consider, for example, German spoken in Germany and Austria).

The larger the difference between two languages, obviously, the more challenging it might be for an individual to move to a certain country. As such, language differences can be considered a significant cost factor in decision-making processes to relocate abroad (Isphording and Otten 2014). Linguistic proximity can be considered to be a proxy for this portability: the closer the language is in linguistic terms (higher proximity), the easier it is to apply source-country language skills in the destination country (Isphording and Otten 2014) and it may also require less effort to learn the language of the host country. Bearing this in mind, it might be expected that students would be more likely to move to countries that are linguistically closer, as the migration-related costs might then be lower in terms of the effort required to learn a new language. As an incoming student, they generally need to follow higher education courses in the host country soon after arrival, which can present a significant linguistic challenge. Empirical research on international migration in a variety of contexts provides evidence for this idea. Language distance has been shown to be an important factor that influences destination choice of international migrants (Adsera and Pytlikova 2015; Bauer, Epstein, and Gang 2005; Belot and Ederveen 2014; Clark, Hatton, and Williamson 2007; Funkhouser and Ramos 1993; Pedersen, Pytlikova, and Smith 2008). This may also hold true for international students, and thus we can expect they are more likely to move to countries that are linguistically closer.

To our knowledge, so far only two papers on the drivers of international student migration at the macro-level have considered language proximity in their quantitative models. First, Baláž, Williams, and Chrančoková (2018) found that connectivity factors, including language, contribute to higher rates of student migration. Second, Börjesson (2017) studied international student recruitment, and described three main poles (Pacific, Central European and French/Iberian), in which language played a role, alongside other factors. Börjesson's study is described in further detail in the discussion section below.

These authors, however, did not explicitly identify the role of language proximity. Nevertheless, we posit that further analysis of the role of language proximity is important, as language is also vital for academic, social and economic integration of international students. According to the literature noted above, linguistic proximity can facilitate international student migration, while linguistic distance can hamper it.

Data and methods

Data

Our analyses are based on international student data as reported in the UNESCO Educational Statistics database (UIS Statistics 2020). This dataset provides information on international students who stay longer than one year in the destination country, and thus aligns well with the main purpose of this paper, which is to understand the role of linguistic proximities on educational destination choices. It is to be expected that this category of international students will be more exposed to the language of a country compared to those who move for shorter periods and the language of instruction might therefore have a more important role. Additionally, degree-seeking students are increasingly viewed as highly-qualified international migrants and the factor of language proximity may play a more important role in their choice of study destination for longer term career opportunities.

We focus on countries where official languages are of Indo-European origin since we use measurements of lexicostatistical distances (Dyen, Kruskal, and Black 1992) that only exist for such countries. Countries with more than one official language are not included because the data on international student flows is provided at country level and thus the language that students are immersed in cannot be known. Finally, English-speaking countries are excluded, as the attractiveness of such countries beyond language proximity has been shown through empirical research and various statistical databases (Abbott and Silles 2016; Kahanec and Králiková 2011; OECD 2019). This results in a dataset with student mobility flows between 21 countries in the European Economic Area.

Variables

Dependent variable

Our dependent variable is the number of international students from country *i* in country *j* in year *x*, weighted by the student population of country *i* in year *x*. In order to be able to observe variations over time we focus on the years 2005, 2010, and 2015.[1]

Independent variable

Our independent variable is linguistic proximity. For this variable, we rely on the lexico-statistical classification developed by Dyen, Kruskal, and Black (1992) that calculates language distances based on the similarity/difference of the vocabulary of the languages. To build the distance for each pair of languages Dyen, Kruskal, and Black compared the list of 200 basic words originally listed by Swadesh (1952, as cited in Dyen, Kruskal, and Black 1992). These words were used to determine the number of cognate words and thus calculate lexicostatistical distances between two languages. These lexicostatistical distances exist only for Indo-European languages, so for this reason our analysis focuses on 21 European countries whose main official language is Indo-European. The same approach is widely used in the literature, including studies on international migration (see, e.g. Belot and Ederveen 2014).[2] This variable ranges from 0 (two countries have the same language) to 1 (maximal linguistic distance). Table 1 illustrates linguistic proximity for all the languages in this study.

Table 1. Language distances

Table 1. Language distances.

	RO	IT	FR	ES	PT	DE	NL	SV	DA	NO	LT	LV	SL	CS	SK	PL	BG	EL	HR	IS
RO	0	0.34	0.42	0.41	0.37	0.75	0.75	0.76	0.76	0.79	0.8	0.82	0.79	0.78	0.77	0.78	0.8	0.84	0.78	0.78
IT	0.34	0	0.2	0.21	0.23	0.74	0.74	0.74	0.74	0.75	0.76	0.78	0.76	0.75	0.75	0.76	0.77	0.82	0.76	0.76
FR	0.42	0.2	0	0.27	0.29	0.76	0.76	0.76	0.76	0.77	0.78	0.79	0.78	0.77	0.77	0.78	0.79	0.84	0.77	0.77
ES	0.41	0.21	0.27	0	0.13	0.75	0.74	0.75	0.75	0.76	0.77	0.79	0.77	0.76	0.76	0.77	0.78	0.83	0.77	0.76
PT	0.37	0.23	0.29	0.13	0	0.75	0.75	0.74	0.75	0.76	0.79	0.8	0.78	0.76	0.76	0.78	0.78	0.83	0.77	0.65
DE	0.75	0.74	0.76	0.75	0.75	0	0.16	0.31	0.29	0.37	0.78	0.8	0.73	0.74	0.74	0.75	0.77	0.81	0.76	0.41
NL	0.75	0.74	0.76	0.74	0.75	0.16	0	0.31	0.34	0.35	0.79	0.81	0.75	0.76	0.75	0.77	0.78	0.81	0.78	0.42
SV	0.76	0.74	0.76	0.75	0.74	0.31	0.31	0	0.13	0.16	0.78	0.79	0.75	0.75	0.74	0.76	0.76	0.82	0.76	0.21
DA	0.76	0.74	0.76	0.75	0.75	0.29	0.34	0.13	0	0.15	0.78	0.8	0.73	0.75	0.73	0.75	0.76	0.82	0.75	0.22
NO	0.79	0.75	0.77	0.76	0.76	0.37	0.35	0.16	0.15	0	0.8	0.82	0.76	0.76	0.76	0.76	0.77	0.82	0.77	0.19
LT	0.8	0.76	0.78	0.77	0.79	0.78	0.79	0.78	0.78	0.8	0	0.39	0.66	0.62	0.61	0.64	0.66	0.83	0.64	0.8
LV	0.82	0.78	0.79	0.79	0.8	0.8	0.81	0.79	0.8	0.82	0.39	0	0.68	0.67	0.64	0.67	0.69	0.85	0.66	0.81
SL	0.79	0.76	0.78	0.77	0.78	0.73	0.75	0.75	0.73	0.76	0.66	0.68	0	0.34	0.31	0.37	0.39	0.82	0.32	0.76
CS	0.78	0.75	0.77	0.76	0.76	0.74	0.76	0.75	0.75	0.76	0.62	0.67	0.34	0	0.09	0.23	0.31	0.84	0.28	0.77
SK	0.77	0.75	0.77	0.76	0.76	0.74	0.75	0.74	0.73	0.76	0.61	0.64	0.31	0.09	0	0.22	0.32	0.83	0.27	0.76
PL	0.78	0.76	0.78	0.77	0.78	0.75	0.77	0.76	0.75	0.76	0.64	0.67	0.37	0.23	0.22	0	0.37	0.84	0.32	0.76
BG	0.8	0.77	0.79	0.78	0.78	0.77	0.78	0.76	0.76	0.77	0.66	0.69	0.39	0.31	0.32	0.37	0	0.81	0.29	0.78
EL	0.84	0.82	0.84	0.83	0.83	0.81	0.81	0.82	0.82	0.82	0.83	0.85	0.82	0.84	0.83	0.84	0.81	0	0.83	0.8
HR	0.78	0.76	0.77	0.77	0.77	0.76	0.78	0.76	0.75	0.77	0.64	0.66	0.32	0.28	0.27	0.32	0.29	0.83	0	0.77
IS	0.78	0.76	0.77	0.76	0.76	0.41	0.42	0.21	0.22	0.19	0.8	0.81	0.76	0.77	0.76	0.76	0.78	0.8	0.77	0

Control variables

In order to control for confounding factors, we included several control variables that have been documented to influence the destination choice of international students. First, since a gravity model is used, we control for geographical distance, measured as the shortest distance between capital cities based on the CEPII calculation (CEPII 2020). The positive relationship between geographical proximity and the size of student mobility flows has been documented by a number of studies (see, e.g. Abbott and Silles 2016; Hou and Du 2020). The work of Abbott and Silles, in particular, illustrated the constraining factor of geographical distance on decision-making for students from low-income countries. This means that students from countries where income is low are more likely to select countries for their studies which are closer, geographically, to their own.

Second, we control for possible network effects, measured as the number of people from country *i* living in country *j*, weighted by the population of country *i*, based on the UN database (2019), adjusted for each measurement year. This variable has been included as several studies suggest that the presence of people from the same country is related to higher numbers of students choosing that country as a destination (see, e.g. Baláž, Williams, and Chrančoková 2018; Beine, Noël, and Ragot 2014). Moreover, student mobility can often be a predictor of labour migration (Dreher and Poutvaara 2006; Thissen and Ederveen 2006), in which the diaspora network also positively influences migration rates.

Third, we control for the difference in GDP per capita in PPP (purchasing power parity) in destination and origin countries, another factor often cited among determinants of student migration (Abbott and Silles 2016; Caruso and de Wit 2014; Wei 2013). Our measurements are based on the World Development Indicators of the World Bank (WDI 2020) and are adjusted for each measurement year. There is no unanimity about the influence of GDP on international student mobility, but generally flows to more developed and richer countries tend to be higher (see, e.g. Adsera and Pytlikova 2015; Larramona 2013).

The fourth control variable is educational reputation, measured as the difference between the ratios of the number of universities in the 500 Shanghai ranking and the student populations of both countries. The data for this variable originates from the Academic Ranking of World Universities (ARWU 2020). Educational reputation can be both a push and pull factor of student mobility as indicated in a vast body of research (Abbott and Silles 2016; Beine, Noël, and Ragot 2014; Cebolla-Boado, Hu, and Soysal 2018; Hou and Du 2020; Naidoo 2007; Rodriguez González, Bustillo, and Mariel 2011; Van Bouwel and Veugelers 2013).

Fifth, we control for the difference in average tuition fees in destination and origin countries, based on data from the European Commission (2014). Tuition fees are another factor often listed among the determinants of international student mobility. There is evidence to suggest that high tuition fees are one cause of declining flows of international students (Caruso and de Wit 2014; Naidoo 2007). However, there is no consensus regarding the role tuition fees play in student migration. For example, Beine, Noël, and Ragot (2014) did not find the influence of tuition fees to be significant.

A descriptive overview of all variables included in the analysis is provided in Table 2.

Analytic strategy

After presenting a descriptive analysis of the major flows between the 21 countries, we analyse the role of language proximity with a gravity model. Based on Newton's law of gravity and later adopted by economists to explain trade flows between the countries, gravity models of international population movements predict that the flow of individuals between two countries is negatively related to the distance between the two countries, after controlling for factors that may affect international migration (adapted from Kanavos and Wouters 2014). Gravity models have also been used to analyse international student mobility flows elsewhere (see e.g. Abbott and Silles 2016; Thissen and Ederveen 2006; Van Bouwel and Veugelers 2013).

Table 2. Descriptive statistics

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	Mean	Standard deviation	Min	Max	Number of observations
Number of students from country *i* in country *j* (absolute number)	568	1,976	0	27,150	1,260
Number of students from country *i* in country *j* (weighted by the total number of students of country *i*)	0	0.01	0	0.12	1,260
Number of students of the country of origin	768,178	837,111	15,169	2,977,781	63
Linguistic distance	0.66	0.21	0.09	1	210
Geographical distance (in km)	1,431	815	60	4,167	210
Migrant stock (absolute number of migrants from country *i* in country *j*)	26,943	104,917	0	1,592,694	1,260
Migrant stock (weighted by the population of the country of origin)	0.002	0.006	0	0.063	1,260
Fees (difference)	0	1,510	−3,300	3,300	1,260
Educational reputation (difference)	0	13.22454	−31.12849	31.12849	1,260
GDP (difference)	0	17,100	−49,939	49,939	1,260

The specification of the gravity model used is a model with two different distances in the denominator (linguistic and geographical). In the gravity equation used both in physics and in trade, the influence of geographical distance is negative, i.e., more distance results in weaker gravitational force and trade volume respectively. We assume that linguistic distance should also be negatively associated with international student flows. A PPML (Poisson pseudo-maximum likelihood) estimator is adopted for our gravity model. A simple OLS (ordinary least squares) on the log-linearized equation cannot be used since, first, there is a significant proportion of zero streams in our sample (5% in 2015) and this complicates the application of logarithms. Second, as shown by Santos Silva and Tenreyro (2006), the presence of heteroskedasticity in the gravity model can introduce bias in the OLS estimation of log-linearized equation. They suggest further that a PPML estimator minimises this bias.

Results

Descriptive analysis of international student flows

In a first analytical step, the international student flows between the 21 countries in our database are descriptively analysed. Table 3 provides an overview of the number of incoming and outgoing students per year.

Overall, there is an increase of 42% in the number of international students between the years 2005 and 2010, with 172,000 students in 2005 and more than 245,000 in 2010. There is another increase of 22% between the years 2010 and 2015, when the number of international students in the countries analysed reached almost 300,000.

Among the origin countries, Germany, Slovenia, Czech Republic, Italy and Romania contributed most to this increase in the period 2005–2010, and Germany, Greece, Italy, Romania and France in 2010–2015. Among the destination countries, Austria and Czech Republic had twice as many international students in 2010 compared to 2005, whereas the Netherlands and Spain tripled the number of students in the same time period. In the case of Spain, for example, the biggest student number increase was from Italy and Romania, both languages are linguistically close to Spanish and all belong to the Latin group of Indo-European languages.

The Netherlands and Czech Republic saw a rise in the number of international students due to the higher flows from Germany and Slovakia respectively, also both geographically and linguistically close countries. There is an increase of 20% and 36% in international students to Denmark and the Netherlands respectively between 2010 and 2015. Considering the flows between countries, those from Germany to the Netherlands and Austria and from Slovakia to Czech Republic

Table 3. Most popular destination and source countries among 21 countries of the analysis in 2005, 2010, and 2015 (absolute numbers)

Table 3. Most popular destination and source countries among 21 countries of the analysis in 2005, 2010, and 2015 (absolute numbers).

Destination countries						Origin countries					
2005	n	2010	n	2015	n	2005	n	2010	n	2015	
1. Germany	48499	1. Germany	48188	1. Germany	52548	1. Germany	29667	1. Germany	58076	1. Germany	70850
2. France	32189	2. Austria	45305	2. Austria	44049	2. Italy	17132	2. Slovenia	26076	2. Italy	33730
3. Austria	24884	3. France	34803	3. Netherlands	40327	3. Greece	13313	3. Romania	15535	3. Slovenia	27203
4. Italy	15039	4. Czech Republic	24905	4. France	34100	4. Slovenia	13240	4. Poland	14997	4.Romania	21765
5. Czech Republic	11228	5. Netherlands	20473	5. Czech Republic	25967	5. Poland	13063	5. Bulgaria	13774	5. Greece	17721
6. Netherlands	8695	6. Italy	14896	6. Denmark	22915	6. Bulgaria	12465	6. Spain	12550	6. Spain	17342
7. Sweden	6398	7. Spain	12998	7. Italy	19070	7. Spain	11679	7. Greece	11748	7. France	17097
8. Denmark	5248	8. Denmark	11947	8. Spain	15594	8. France	11103	8. France	11329	8. Bulgaria	15215
9. Spain	4994	9. Slovakia	6539	9. Slovakia	8381	9. Romania	9902	9. Austria	9557	9. Poland	14387
10. Norway	4097	10. Norway	5007	10. Poland	7489	10. Austria	9572	10. Czech Republic	8632	10. Austria	11695

Source: UNESCO Educational Statistics

Table 4. Gravity models on the role of linguistic proximity on international students' destination choice, standard errors between brackets

contributed most to the increase in the period 2005–2010, and from Germany to the Netherlands in 2010–15. As can be observed, most of these patterns concern international student mobility between countries that are geographically and linguistically close.

Gravity models

First the relationship between student flows, linguistic distance and other control variables in 2005, 2010, and 2015 are analysed separately. This is followed by a pooled model, controlling for possible period effects. Table 4 presents the results of the gravity model analysis.

As can be seen, all models reveal a statistically significant negative relationship between language distance and the number of international students. Model I for the year 2005 shows that linguistic distance has a negative correlation with the number of international students, indicating that the larger the distance between the official languages in the home and destination countries, the less likely it is that students will move to that specific destination. Model II and model III reveal the same pattern for the years 2010 and 2015. The negative correlation persists in the pooled model – model IV – where we control for period effects. In sum, all models support our hypothesis that language proximity has a positive effect on student mobility, i.e., that students are more likely to move for their studies to countries that are linguistically close. This finding appears to be very robust, as it holds while controlling for possible confounding factors, as well as when considering different time periods.

Discussion

Analysis of the macro factors influencing international student migration showed that international degree-seeking students are more likely to move to countries whose official language is linguistically close to that of their home country. A number of aspects may help to explain this.

Linguistic distance between countries might correlate strongly with cultural distance in a broad sense, and the language distance variable might hence capture the effect of cultural and historic ties between countries in addition to a purely linguistic effect. This can be observed in Börjesson's (2017) analysis of global student mobility flows through a correspondence analysis. His analysis of student recruitment revealed three key geographical poles. The Pacific/Market pole corresponds to the use of English as a global language; the French and Iberian pole to colonial logic; and the

Table 4. Gravity models on the role of linguistic proximity on international students' destination choice, standard errors between brackets.

	Model I 2005	Model II 2010	Model III 2015	Model IV Pooled model with time effects
Independent variable				
Linguistic proximity	−0.434*** (0.127)	−0.769*** (0.125)	−0.780*** (0.119)	−0.742*** (0.040)
Control variables				
Geographical distance	−0.024 (0.094)	−0.147(0.093)	−0.179* (0.091)	−0.073* (0.033)
Student population at destination	−0.084 (0.083)	−0.147 (0.082)	−0.006 (0.077)	−0.163*** (0.031)
Network effect	0.820*** (0.060)	0.761*** (0.060)	0.650*** (0.056)	0.679*** (0.019)
Difference in the educational reputation	0.631* (0.262)	0.590 (0.303)	0.625* (0.242)	0.414*** (0.079)
Difference in fees	0.034 (0.045)	0.002 (0.038)	−0.011 (0.028)	−0.012 (0.012)
Difference in GDP	−0.057 (0.097)	0.059 (0.282)	0.077 (0.248)	0.088 (0.054)
Dummy_2010				0.148* (0.064)
Dummy_2015				0.299*** (0.062)
Constant	5.555*** (0.663)	5.889*** (0.761)	5.744*** (0.726)	4.711*** (0.359)
Pseudo R^2	0.67	0.68	0.65	0.65
Observations	420	420	420	1,260

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Central European pole (Slavic/Germanic) corresponds to a proximity logic. Each of these poles/logics are associated with particular languages or language groups, as indicated. Thus this study indicates how geographic, cultural, historical and linguistic proximity can be related.

The significant influence of linguistic and cultural proximities on international migration within the European Economic Area is also confirmed in the analysis carried out by Belot and Ederveen (2014). In their analysis, the negative relationship between language distance and international migration remained highly significant when accompanied by other cultural factors, such as religious distance and differences in norms and values.

In addition, the cultural effect can also be reflected by the network variable as migration flows to the countries with cultural and historical ties are higher. This could be due to the fact that migrants who moved to the destination country earlier were guided by the same factors of cultural and linguistic proximity (Adsera and Pytlikova 2015; Bauer, Epstein, and Gang 2005; Belot and Ederveen 2014; Clark, Hatton, and Williamson 2007; Funkhouser and Ramos 1993; Pedersen, Pytlikova, and Smith 2008).

In terms of rational choice theory, the language factor might be particularly important in the decision-making process of international students when they calculate the monetary and non-monetary costs of moving abroad – either consciously or unconsciously. In contrast to short-term exchange students, degree-seeking students have closer and longer-term contact with the official language of the country; they may consider career opportunities in the country where they study and thus learning the language may represent a higher priority for such students.

According to multiple studies (Czaika 2018; Dreher and Poutvaara 2006; Thissen and Ederveen 2006), international students are increasingly considered as skilled 'economic agents' who contribute to a host country's economy (Riaño, Van Mol, and Raghuram 2018). This results in an increase in policies that are developed to extend the stay rate of such students even in times of stricter migration policies.

Moreover, moving to a linguistically close country can facilitate cultural adaptation and reduce the costs of migration. Similarity of languages can speed up the process of learning the language of the destination country (Chiswick and Miller 2007; Isphording and Otten 2014) that the students might need for their studies or work in the future. As these studies show, language proximity often correlates with cultural proximity so not only similarities between languages but also norms and values should positively affect adaptation of international students. Further qualitative and quantitative research of micro-level determinants could help understand the mechanisms behind that association.

Limitations

It is important to mention some limitations to our analysis. First, the study relies on one approach to measuring linguistic proximity and only considers official languages. Future research could focus on other classifications (historical, phonetic, etc.) or consider commonly spoken but not official languages of the country (see, e.g. Melitz and Toubal 2014).

The second limitation relates to working with secondary data. This also places some restrictions on the study since definitions, terminology, approaches and data collection methods may differ across databases. For instance, international student data can be found on several different databases and, since the focus of our analysis is degree-seeking international students, the UNESCO database was used (as also did Beine, Noël, and Ragot 2014). However, it only includes students who migrate for educational purposes, thus excluding foreigners already resident in the country. Furthermore, it focuses on students who have a minimum one-year stay in a destination country, and so excludes short-term mobile students.

Third, since this paper only focuses on the role of language proximity, the influence of languages commonly taught as foreign languages in the origin country school curriculum were not considered. However, we believe it would be worthwhile for future studies to investigate this factor.

Conclusion

In this paper, linguistic proximity in international student migration among 21 countries of the European Economic Area in the years 2005, 2010, and 2015 was investigated. We found that the flows of international students to linguistically close countries are higher than flows between linguistically more distant countries. Our analysis confirmed that language proximity plays a role in the decision-making processes of students in the 21 countries studied regarding their destination choice. Following the theoretical cost–benefit framework of our paper, language proximity can help reduce migration costs related to social, cultural, academic and economic factors and facilitate international students' adaptation in a new environment.

While a range studies have shown that the most common world languages influence the direction of international student mobility flows, the crucial contribution of our research is to demonstrate that language proximity also plays a significant role in the decision-making process and destination choice of an international student. This should therefore be taken into account when seeking to understand the complex decision-making processes driving international student mobility.

Notes

1. To avoid the problem of missing data, for two countries (Austria and Iceland) information from the neighbouring years, 2006 and 2014 is used. Using this method meant that the only missing data were flows to Germany in 2005 and 2010. Taking the Western Europe and North America region as a whole for those years, for each origin country we subtracted the flows to all destination countries. The remaining number of outbound students for each country therefore represented the flows into Germany for 2005 and 2010.
2. Please see Ginsburgh and Weber (2016) for the description of other existing classifications and Adsera and Pytlikova (2015), Isphording and Otten (2014), Baláž, Williams, and Chrančoková (2018) for the application of these classifications in their analyses.

Acknowledgements

Elena Ovchinnikova is grateful to Olga Klachkova, Olga Suchkova, and Evgeny Ivanov for their excellent research assistance and to the Center for Study of Diversity and Social Interactions at the New Economic School for its support.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Chapter 4. Foreign Language Skills in the Study Abroad Decision-Making Process and Destination Choices

4.1 Introducing Paper Two

Although understanding the role of language at the macro level in shaping international student flows helps us see global trends and patterns of educational mobility, it does not provide insights into the influence of languages that a student speaks on their decision-making and destination choices. Following the Coleman theory (see Section 2.7) which stressed the importance of interrelation between macro and micro factors (Coleman, 1990) and supporting Lipura and Collins' (2020) concern about the lack of connectivity between different approaches to analysing the factors of international student mobility, this paper (currently under review with *Studies in Higher Education*) aims both to complement the findings of the macro level analysis and expand on the role of language as a micro factor in driving and shaping international student flows (Ovchinnikova et al, under review).

The macro level analysis in the first paper (see Chapter 3) focused on the role of linguistic distance between mother tongues of home and destination countries. It implied that the student does not yet know the language of the destination country and is more likely to go to a country where the official language is similar to their mother tongue. However, this excludes students who may already have some knowledge of the language of a destination country and who might see it as a reason to participate in study abroad programmes in this country. The micro-level analysis presented in this second paper thus aims to shed more light into the role of individual foreign language skills in international student decision-making and destination choices.

The analysis seeks to expand on the influence of language as a micro factor, first, by highlighting the role of individual foreign skills as a driver of international student mobility rather than an outcome, which is a more frequently researched way to analyse language variables at the individual level (see e.g. Jackson et al., 2020; Ożańska-Ponikwia & Carlet, 2021).

Second, when language is considered as a factor influencing international students' aspirations, it is often viewed as both a barrier and a facilitator of mobility but the details behind these two roles may not always be known (see e.g. Beerkens et al., 2016; Nilsson, 2015). By focusing on foreign language proficiency, use and the number of languages spoken, the study provides a deeper insight into what students may mean by seeing language as a motivator or deterrent of their study abroad decision-making. The second part of the micro factor analysis also contributes to better understanding the link between language and the choice of a study abroad destination. As evidenced in the literature, international student flows are usually directed towards countries with the same language, most popular languages, or linguistically close countries (Beine et al., 2014; Rodriguez Gonzalez et al., 2011; Ovchinnikova et al., 2022). However, can knowledge of foreign languages also play a role? By examining the link between languages that students speak and their destination choices the analysis makes an important contribution by improving our understanding of the role of language at the macro level.

In addition, this micro level study also complements the macro level analysis, seen in Chapter 3, by focusing on a different category of international students, namely those taking part in credit mobility, i.e. for a shorter period than a full qualification. Although having some similarities, students participating in short term and long term mobility have been shown not only to be guided by different factors influencing their mobility aspirations but also in choosing different destinations for study abroad opportunities (Castillo Arredondo et al., 2018). By introducing a different framework – Personal Investment Theory – more socio-cultural and psychological motives and rationales are brought to the analysis and discussion of results and thus the paper complements economic goals outlined by the rational theory of the macro level study in Chapter 3.

Finally, the analysis is narrowed down to two countries of the EEA. This helps to shed more light on individual contextual factors in international student decision-making and destination choices against the determinants of the first macro level analysis at country level.

4.2 Foreign Language Skills in the Study Abroad Decision-Making Process and Destination Choices

4.3 Background

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Under review (Studies in Higher Education)

Foreign language skills in the study abroad decision-making process and destination choices

Abstract

In the literature on international student mobility, foreign language skills are usually discussed as an outcome rather than a driver of study abroad programs. Our study focused on the role of foreign language skills in international students' study abroad decision-making processes and their destination choices. Our analysis is based on an online survey, conducted among students of three European universities (n = 2,327), and revealed that students who assess their skills as advanced are more likely to aspire to study abroad compared to those who evaluate their skills at an intermediate level. Students who speak a foreign language on a daily basis are also more likely to aspire to study abroad. Furthermore, our analysis suggests that the number of foreign languages students master does not seem to play a role. Finally, the findings demonstrate a significant influence of the knowledge of the official language of the country on the choice of study abroad destinations. As foreign language skills are an indispensable part of study abroad programs, these findings are important to understand how the self-perception of linguistic capital influences study abroad decision-making.

Keywords: foreign language skills, destination choices, foreign language proficiency, study abroad decision-making, international student mobility

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Introduction

The website of the international office of Cologne University of Applied Sciences, states that 'Good foreign language skills are one of the most important prerequisites for a successful stay abroad. For admission to a host university, acceptance by an employer, or for scholarship applications, proof of proficiency in the host country's language of instruction or working language is often required' (TH Köln 2022, Preparation for a Stay Abroad, section 5). Similar statements can be found on the websites of other higher education institutions across the world, stressing how useful foreign language skills can be to embark on international experiences.

Foreign language skills bring both direct and indirect benefits to international students. For example, these skills can be supportive in terms of preparing the stay abroad, getting oriented in the destination society, and becoming integrated in the local student communities and higher education life more generally. Next to this facilitating function, the desire to enhance foreign language skills is one of the most frequently cited motivations to participate in study abroad programs (see, e.g., Bell 2016; Bourke 2000; Cubillo, Sanchez, and Cervino 2006; Lesjak et al. 2015; Rodriguez Gonzalez, Bustillo, and Mariel 2011). Consequently, an abundant number of studies have focused on the analysis of acquired foreign language proficiency *as an outcome* of international student mobility (see, e.g., Jackson, Howard, and Schwieter 2020; Lafford 2006; Lafford and Collentine 2006; Luo and Jamieson-Drake 2015; Ożańska-Ponikwia and Carlet 2021).

Interestingly, the role of foreign language skills *as a driver* of international student mobility has been less studied. Existing empirical research consistently indicates, on the one hand, that a lack of foreign language confidence can be a potential barrier to study abroad (see, e.g., Beerkens et al. 2016; Findlay et al. 2006, Van Mol and Timmerman 2014). On the other hand, it can also be expected that foreign language skills are a significant facilitator of study abroad, as they might lower the 'migration costs' associated with moving to foreign destinations

(Isphording and Otten 2014). Given the lack of empirical research focusing on the role of foreign language skills as a driver in decision-making for student mobility, in this paper we explore (1) the role that foreign language proficiency and use play in study abroad decision-making processes and (2) the role foreign language skills play in destination choices.

Our paper makes three main contributions to the academic literature. First, when the role of language is taken into account in macro-level analyses, results generally indicate that international student flows are mainly directed to countries with similar languages, English-speaking countries and countries where the most popular languages are spoken (Abbott and Silles 2016; Baláž, Williams, and Chrančoková 2018; Beine, Noël, and Ragot 2014; Borjesson 2017; Kahanec and Kralikova 2011; Maringe and Carter 2007; Van Bouwel and Veugelers 2013; Ovchinnikova, Van Mol, and Jones 2022). Nevertheless, these studies focus on *official* languages of the country of origin and destination, hence highlighting the relationship between mother tongues and foreign languages. However, students' *foreign* language proficiency can – next to their mother tongue – be expected to be important for destination choices as well. Consequently, students who master more foreign languages might have a broader array of potential destination countries available following the 'linguistic proximity argument' outlined above. Moreover, higher linguistic capital reduces the cost of learning another foreign language (Gerhards 2014) and may thus positively influence the decision to study abroad.

Second, we extend studies on the role of foreign language skills in decision-making processes by considering both foreign language *proficiency* and *use*. This distinction is important, as students might have learned a foreign language during their secondary school education, and hence have good proficiency, but never use it in their daily life. In such situations, students may lack confidence in the foreign language, which could potentially result in the decision to refrain from study abroad opportunities.

Third, studies on students' study abroad decision-making processes very often focus on

their general motivations to study abroad, regardless of potential destinations. In this paper, in contrast, we also link students' foreign language skills to destination choices, hypothesizing that students are more likely to move to destinations with an official language they are familiar with. Moving to study in a country where a known foreign language is spoken can enable greater exposure to the language, gaining deeper insight into the host culture, meeting new people and, as a result, growing personally and professionally (Beerkens et al. 2016; Doyle et al. 2010; Lesjak et al. 2015; Perez-Encinas, Rodriguez-Pomeda, and de Wit 2020).

Moving to a linguistically close country can also reduce both monetary and non-monetary costs. Language proximity minimizes the language acquisition costs as it will be easier to learn the language of the destination country (Chiswick and Miller 2007; Isphording and Otten 2014). If the language of instruction is different from the most important or official language of a destination country, having proficiency in the language of the destination country may also help students engage in some activities outside the university and develop their social network. Clearly, the possibility of using the language more often, both inside and outside the university, could be one way of enhancing foreign language skills and may be what students themselves mean when talking about foreign language improvement. Consequently, we can expect that foreign language proficiency and use can play a major role in the choice of destination country.

Our study is based on an online survey conducted among higher education students at three higher education institutions in Belgium and the Netherlands in 2019. The survey collected data on language proficiency and use, aspirations to participate in a study abroad programme (that is, *before* making the decision to take part), and their preferred destination choices. This allows us to empirically disentangle the relationships described above.

Background

Personal Investment Theory

The theoretical framework for this study is Personal Investment Theory, initially developed to understand the reasons and motivations behind investing time, energy and resources into a particular activity (Maehr and Braskamp 1986). Personal Investment Theory posits that the decision to engage in an activity is based on a combination of three factors, namely facilitating conditions, sense of self, and perceived goals. King, Yeung, and Cai (2019) analysed the role of these factors in the decision to study a foreign language. A similar approach can be used in relation to study abroad decision making (see, e.g., Van Mol 2021). In the next sections, we will describe these three factors more in detail.

Facilitating Conditions

Facilitating conditions explain the role of the socio-cultural environment in the decision to undertake an activity. Thus, for students, the influence of parents, peers, schools and socio-cultural context in general have been found to play an important role both in their motivations to learn and use a foreign language and participate in study abroad programs (Brooks and Waters 2020; King, Yeung, and Cai 2019; Netz et al. 2020; Van Mol and Timmerman 2014).

First, when it comes to family social and economic capitals, students from higher socio-economic classes might have better language proficiency levels because of the cultural capital they derive from their socio-cultural context. For example, they might be more exposed to different languages at home and at school, be more likely to travel abroad and use foreign languages, their parents might have paid for extra classes, and/or schools might offer other foreign languages outside the formal curriculum. Similarly, despite often dealing with organized student mobility supported by various grants, most mobile students tend to come from higher income families, and financial barriers remain a significant deterrent to engage in study abroad programs (Netz et al. 2020).

Furthermore, the influence of parents who have lived in another country has also been

proven to positively influence the probability of studying abroad (Van Mol and Timmerman 2014). This experience may signal the openness of the family towards international experience and consequently to foreign language exposure. In similar vein, a migration background of the family can also be expected to facilitate language learning. Students who were either born abroad or whose parent(s) are of foreign origin, can have the advantage of often already being proficient in more than one language, and/or using them regularly in the home context.

Finally, peer support in the process of foreign language learning, a positive experience of peers who have previously participated in study abroad programs, or having friends who live abroad may all stimulate the desire to enhance and use foreign language skills and prompt students to enroll in international learning programs (Brooks and Waters 2020; King, Yeung, and Cai 2019; Van Mol and Timmerman 2014).

Sense of Self

Sense of self can be described as a self-developed student's perception of their educational skills, including foreign language proficiency. As King, Yeung, and Cai (2019) point out, 'the ideal self refers to the learner's internal desire to become an effective foreign language user and the ought-to self refers to the social pressures coming from the learner's environment' (4). Therefore self-perception of foreign language proficiency can be expected to also influence students' decision to engage in study abroad programs. When students assess their foreign language skills positively, it can be expected that they are more likely to participate in study abroad programs, whereas a fear that their foreign language skills may not be sufficient often prevents students from going abroad, or from using the foreign language during study abroad programs (Beerkens et al. 2016; Findlay et al. 2006; Souto Otero et al. 2013; Van Mol and Timmerman 2014). In addition to not feeling confident in foreign language skills, some studies have shown that students explicitly report 'studying in a language other than English' to be a barrier (see, e.g., Brown, Boateng, and Evans 2016; Doyle et al. 2010; Lane-Toomey and Lane 2012). The

importance of self-perception was illustrated in Ożańska-Ponikwia and Carlet's (2021) comparison of Spanish and Polish pre-Erasmus participants and non-participants which revealed that students who were planning to start a study abroad program achieved much higher results in fluency and self-reported foreign language proficiency.

Perceived goals

Perceived goals mean that students have some reason for undertaking the activity, from genuine interest to being able to achieve a higher social status. King, Yeung, and Cai (2019) consider the following groups of goals with regard to foreign language learning motivations: mastery, which refers to the aim of learning and mastering foreign language skills; performance, with a goal of being better than others at learning a foreign language; extrinsic, aimed at getting some tangible rewards; and social goals, which in their turn can be subdivided into social affiliation, social status, social approval goals and so on.

There is a clear link between mastery goals and students' decision to participate in study abroad programs, since one of the frequently cited motivations to engage in these programs is the desire to enhance foreign language skills - being more exposed to the studied language as a language of instruction and of the country, gaining a deeper insight into the culture, and experiencing a new linguistic and cultural environment (Bell 2016; Bourke 2000; Castillo Arrendo et al. 2018; Cubillo, Sanchez, and Cervino 2006; Lesjak et al. 2015; Rodriguez Gonzalez, Bustillo, and Mariel 2011).

Students may also be guided by extrinsic factors since they usually consider both costs and benefits before making the decision to study abroad. They may embark on study abroad programs and enhance their foreign language skills to eventually improve their career opportunities or future earnings.

If language indeed plays the kind of role in study abroad decisions according to Personal

Investment Theory, we can expect it may also structure decision-making processes in terms of destination choice.

Destination choices

As students often mention the desire to improve their foreign language proficiency and be more exposed to the language they are studying, language may be a key factor in international students' destination choices. Brown, Boateng, and Evans' (2016) analysis of medical students' study abroad destinations revealed a preference for countries with the same language or those which are linguistically close. Some students explicitly mentioned their desire to study in a country whose language was similar to their own since it would be more easily acquired. As the authors note, 'although many students want to experience other cultures, it seems they prefer countries that are similar to their home countries, especially, in terms of languages spoken' (Brown, Boateng, and Evans 2016, 70). This suggests that international students choose a destination country that can provide them with the greatest utility at the lowest costs.

Motivations and criteria for destination choice may be different for credit and degree mobility. In contrast with degree seeking students, destination choices of credit mobility students are often determined by the agreements in place for their university. According to Lesjak et al. (2015), students' locational choices include both general and touristic factors, and eventually students decide on such destinations that will allow them to grow personally and professionally. Thus, going to study in a country where their studied foreign language is spoken can help to meet these needs, by promoting a better understanding of the culture of the country, facilitating interaction with other students both inside and outside the classroom, and as a result improving their cultural and social capital. The study of Castillo Arredondo et al. (2018) illustrates this. In the analysis of destination choices of international students studying abroad in Spain and Germany, the language factor, namely the language of instruction and the language of the country, was a key factor in destination choice. We extend this perspective by looking at a

broader array of destination choices.

Methodology and data

The analysis presented in this paper is based on the results of an online survey conducted among higher education students in Tilburg University, the University of Antwerp, and the Vrije Universiteit Amsterdam in 2019. The purpose of the survey was to investigate students' barriers and drivers to engage in international activities at home and abroad. All students from the three participating institutions received an invitation to complete the online survey. After we excluded students who had already participated in study abroad programs, our final sample included 2,327 observations for the first analysis (decision-making processes) and 1,005 observations for the second analysis (destination choices).

Belgium and the Netherlands share the same official language. The three institutions were similar in size, ranging from 20,000 to about 29,796 enrolled students in 2020-2021. On a national level, the outward credit mobility rates for both countries are rather different. In Belgium, this rate is comparable to many other European countries. The Netherlands reported the second highest outgoing credit mobility rate in 2017 across European countries (Van Mol, Cleven, and Mulvey (in press)). When looking at the institutional level, however, the three institutions are rather comparable, and do not rank among the top sending institutions in their countries, sending abroad only a small (but comparable) share of their students on an annual basis (the share of outgoing students in 2018-2019 varied between 1.81 and 2.29 percent across the institutions).

Variables

Dependent variables

Our dependent variable in the first regression is a categorical variable that indicates the student's intention to study abroad based on the question 'Do you intend to spend some time abroad

(again) for studying / an internship during the remainder of your degree?'. This variable consists of three groups, namely (1) potential movers, students who plan to go abroad (those who answered either 'Definitely' or 'Definitely, I have already signed up'), (2) doubters, namely students who answered 'Might or might not' and 'I don't know', and (3) non-mobile students, who answered 'Probably not' and 'Definitely not'). For the second analysis on destination choices, we consider only the groups of potential movers and doubters, as they indicated their preferred destinations in the questionnaire, whereas this question was not asked to the non-mobile students.

The dependent variable in the second regression on destination choices is a dummy variable based on students' answers to the question about their destination choices. Together, the students in the sample indicated 109 countries of preference. Consequently, we created 109 observations for each respondent on destination choice, resulting in a total of 109,545 observations. For each of these observations (defined by the student *i* and the country *j*) the dependent variable is equal to '1' if the student *i* indicates the country *j* among his destination choices, and '0' if otherwise.

Independent variables

The independent variables in the first regression focus on self-reported foreign language proficiency and use. The respondents could name up to 5 languages and rate them on a scale from 1 (mother tongue) to 4 (basic command), as well as from 1 (daily use) to 5 (almost never use). For the variable on foreign language proficiency, we use the highest self-reported score for the different foreign languages students named except the mother tongue(s). For the variable on foreign language use, we use the highest self-reported result among all the indicated languages except the first one, which we presume to be the mother tongue. The third variable is a categorical variable indicating 'only (a) mother tongue(s)', '1 foreign language', '2 foreign languages', '3 foreign languages', '4 or more foreign languages'.

The independent variable in the second regression is a dummy variable based on students' answers to the question about the languages they speak. Every observation is defined as the combination of student *i* and country *j*. The variable is equal to '1' if the student speaks the language of the country and '0' if otherwise.

Control variables

We control for confounding factors that have been found to influence international student mobility choices. First, we control for students' social status, which is measured by the question 'In our society there are groups which tend to be towards the top and those that are towards the bottom. Here we have a scale that runs from top (1) to bottom (10). Where would you put yourself on this scale?' This results in five categories: the higher class of society (groups 1 and 2); upper middle class (groups 3-4); middle class (groups 5-6); lower middle class (groups 7-8); and working class (groups 9-10). Most students rated themselves as belonging to the upper middle, middle or lower middle classes.

In addition to the subjective social status, parental education also plays a role in the decision to study abroad (Findlay et al. 2006). This factor has been found to be especially important in the decision making of female students (Van Mol 2021). To control for the educational level of parents, we use students' answers to the question about the highest level of education their parents have completed and then divide their answers into three groups based on the ISCED classification, namely the 'high' category includes the answers 'bachelor's degree or equivalent', 'master's degree or equivalent' and 'doctorate' and corresponds to ISCED 5-8; the 'middle' category is equivalent to ISCED 3,4 and includes the answer 'secondary school or equivalent'; and the 'low' category equals ISCED 1,2 and comprises the answers 'less than primary school or primary school'. Second, we control for previous experiences abroad of the students and their parents. Around a third of the students' parents had experienced living abroad, and around 20% of students themselves lived abroad before entering higher education. Around

15% of the students took a gap year before university, and a bit more than half of those spent it abroad. Almost all students in our sample travelled abroad for leisure either with their family, friends, as a group or alone, and most of the students had such trips on average 24 times, which we suppose should also correlate positively with their intentions to study abroad.

Third, students' migration background can also influence their decision to study abroad, both positively and negatively. As Netz et al. (2020) note, in some countries across Europe students with a migration background tend to be overrepresented in study abroad programs, whereas in other countries they are participating less compared to the majority population. To control for the migration background of students we use information from the survey questions about the original nationality of their parents. Most of the students' parents had the nationality of the country where the students live, 7% had only one parent with the nationality of the country where they live and in 30% of cases the students' parents did not have at birth the nationality of the country in which their children study.

Fourth, to control for social network effects, we control whether students' siblings studied abroad (0 = no, 1 = yes), as well as whether respondents had friends abroad (0 = no, 1 = yes).

Finally, we control for gender, study field, university and university year. Multiple studies show that female students tend to be more represented in study abroad programs (Findlay et al. 2006; Netz et al. 2020). As for the influence of the study field, students of humanities departments have been found more likely to engage in international study experiences (Brooks and Waters 2020).

In the second analysis in addition to the factors listed above we also control for the country of birth of students' parent(s) and students' experience, if any, of living in a particular foreign country with their family. Finally, we add one simple dummy variable for each

Table 1. Descriptive statistics (N=2,327)

destination country[1].

An overview of all descriptive statistics can be consulted in Table 1.

Table 1. Descriptive statistics (N = 2,327)

	N	%	*Range*
Mobility			0-3
Potential movers	800	34.4	
Doubters	589	25.3	
Non-mobile students	916	39.4	
Missing	22	0.9	
Proficiency level			0-3
Advanced	1,827	78.5	
Intermediate	343	14.7	
Basic	56	2.4	
Language use			0-6
Daily	1,249	53.7	
Weekly	641	27.5	
Monthly	116	5.0	
Several times a year	59	2.5	
Almost never	20	0.9	
Only one language indicated	64	2.8	
Missing	178	7.6	
Number of languages			0-5
Only mother tongue(s)	34	17.8	
One foreign language	415	35.6	
Two foreign languages	829	30.6	
Three foreign languages	712	11.8	
Four or more foreign languages	274	2.7	
Missing	63	1.5	
Subjective social status			0-5
The higher class of society	117	5.0	
The upper middle class of society	701	30.1	
The middle class of society	711	30.6	
The low middle class of society	741	31.8	
The working class of society	28	1.2	
Missing	29	1.2	
Parent(s) lived abroad			0-3
At least one of the parents lived abroad	787	33.8	
Neither of the parents lived abroad	1,487	63.9	
Unknown	48	2.1	
Missing	5	0.2	

[1] The final regression includes 99 instead of 109 dummy variables, 10 were deleted to ensure moderate multicollinearity.

Student's experience of living abroad			0-2
No	1,915	82.3	
Yes	405	17.4	
Missing	7	0.3	
Gap year abroad			0-2
Spent time abroad	201	8.6	
No time abroad	2,122	91.2	
Missing	4	0.2	
Trips abroad			0-3
Less than 12 trips abroad	597	25.7	
Between 13 and 24	593	25.5	
Between 25 and 36	569	24.5	
37 trips abroad or more	568	24.4	
Educational background of the parents			0-5
High	1,681	72.2	
Middle	55	2.4	
Low	538	23.1	
Unknown	47	2.0	
Missing	6	0.3	
Original nationality of the parents			0-3
Both of the parents had Dutch or Belgian nationality	1,406	60.4	
Neither of them had Dutch or Belgian nationality	707	30.4	
Only one of the parents had Dutch or Belgian nationality at birth	178	7.6	
Missing	36	1.5	
Siblings' international experience			0-2
No siblings studied abroad	1882	80.9	
At least one sibling studied abroad	441	19.0	
Missing	4	0.2	
Friends abroad			0-2
No friends abroad	958	41.2	
Friends abroad	935	40.2	
Missing	434	18.7	
Gender			0-1
Female	1,489	64.0	
Male	838	36.0	
Study field			0-5
Social Sciences	1,052	45.2	
Engineering and technology	51	2.2	
Humanities	382	16.4	
Medical and Health Sciences	385	16.5	
Natural Sciences	187	8.0	
Missing	270	11.6	
Home University			0-2
Vrije Universiteit Amsterdam	924	39.7	
University of Antwerp	849	36.5	
Tilburg University	554	23.8	
University year			0-2
Bachelor	1,204	51.7	
Master	1,105	47.5	

Missing	18	0.8	
Experience of living in the destination country			0-1
No, the student did not live in this country earlier	109,293	99.8	
Yes, the student used to live in this country	252	0.2	
Parent's birth country			0-1
No, the destination country is not the country where mother/father was born	109,143	99.6	
Yes, the destination country is the country of birth of at least one of the parents	402	0.4	

Analytic strategy

In order to analyse the role of language use and proficiency in students' decision making to engage in study abroad programs, we apply a multinomial logistic regression model. To investigate the role of foreign language skills in destination choices, we apply a binary logistic regression. Data screening indicated that there was a significant number of missing values in the dataset (34 percent of students had missing data on at least one variable of interest). Consequently, we applied multiple imputation by chained equations (MICE), one of the principal methods for dealing with missing data (Azur et al. 2011).

Having only categorical independent and control variables helped us avoid the risk associated with some of the assumptions of the logistic model, such as linearity and the absence of outliers. Besides, we used the variance inflation factor (VIF) to check the presence of multicollinearity[2].

Results

First, we ran three separate multinomial logistic regressions to analyse the relationship between self-reported foreign language proficiency, foreign language use, and number of spoken languages and the probability to engage in study abroad programs (Table 2). The results indicate that students who have advanced proficiency in a foreign language have a significantly higher

[2] In all the regressions VIF is inferior to five for the independent variables as well as almost all the control variables - it only exceeds five (but remains inferior to ten) for some of the dummy variables associated with the destination country. In the absence of VIF calculation for multinomial logistic regression, we ran ad-hoc binary logistic regressions to do the test.

propensity to aspire to participate in study abroad programs compared to students who evaluate their foreign language proficiency level as intermediate. We do not observe any statistically significant differences between students who have an advanced foreign language proficiency level and those who have a basic proficiency level, albeit the coefficients are in the expected direction. That is, those with advanced foreign language proficiency levels are more inclined to indicate an aspiration to study abroad. Also for language use, we observe that those who use a foreign language daily are more likely to aspire to study abroad compared to students who use a foreign language on a weekly or monthly basis. Interestingly, no such statistically significant differences are observed with those who use foreign languages less frequently. Finally, we do not observe any statistically significant differences regarding the number of foreign languages students speak.

Table 2. The relationship between language factors and study abroad aspirations (N = 2,327)[3]

	Dependent variable (ref: non-mobile student)	
	Doubter (1)	*Potentially mobile (2)*
Proficiency level (ref=advanced)		
Intermediate	-0.185	-0.470**
	(0.163)	(0.159)
Basic	-0.104	-0.388
	(0.353)	(0.401)
Language use (ref=daily)		
Weekly	-0.167	-0.274*
	(0.142)	(0.130)
Monthly	-0.132	-0.607*
	(0.252)	(0.258)
Several times a year	0.032	-0.216
	(0.359)	(0.368)
Almost never	-1.887	0.254
	(1.073)	(0.531)
Only one language indicated	0.212	0.590

[3] For convenience, in the text we present only the coefficients on the language variables. Full models control for students' subjective social status, experience of living and travelling abroad, parental education and parents' experience of living abroad, social network effect, nationality of the parents, study field and year, university, and gender. Please consult Appendix 1 for the full models. As a robustness check we also ran the regression with 'only mother tongue(s)' as a reference group (see Appendix 2). The results are consistent with those we present in the Table.

	(0.350)	(0.350)
Number of languages (ref= one foreign language)		
Only mother tongue(s)	-0.768	0.108
	(0.518)	(0.432)
Two foreign languages	-0.019	0.258
	(0.167)	(0.164)
Three foreign languages	0.178	0.317
	(0.173)	(0.177)
Four or more foreign languages	0.090	0.087
	(0.219)	(0.220)
Pseudo R^2	0.11	

*p <0.05, **p < 0.01, ***p < 0.001*

Second, running a binary logistic regression we analysed the role of knowledge of foreign languages in students' destination choices (Table 3). The results indicate that destination choices clearly correlate with the languages students have knowledge of. This suggests that students tend to choose a study abroad destination where they can speak or practice a language they are already familiar with.

Table 3 The Role of Foreign Language Skills in Destination Choices (N = 1,003)

	Dependent variable: Destination choice
Intercept	-6.424***
	(0.221)
Knowledge of destination preference official language (ref: no)	0.894***
	(0.081)
Student lived in the destination country	0.461*
	(0.188)
Parents born in the destination country	0.523**
	(0.175)
Mobility 'Yes'	0.057
	(0.041)
Subjective Social Status (ref=upper middle class)	
The higher class of society	0.038
	(0.097)
The middle class of society	0.041
	(0.052)
The low middle class of society	0.031
	(0.051)
The working class of society	0.078
	(0.186)
Parent(s) lived abroad (ref=at least one of the parents lived abroad)	
Neither of the parents lived abroad	-0.084
	(0.049)
Unknown	-0.114
	(0.144)
Student's experience of living abroad (ref=no experience)	
Experience of living abroad	-0.096
	(0.059)

Gap year abroad (ref=no year abroad)	
Gap year abroad	-0.049
	(0.068)
Trips abroad (ref=37 times or more)	
Less than 12 trips abroad	0.022
	(0.062)
Between 13 and 24 trips	-0.044
	(0.059)
Between 25 and 36 trips	-0.036
	(0.057)
Education of the parents (ref=High)	
Low	0.064
	(0.123)
	-0.017
Middle	(0.051)
Unknown	0.158
	(0.145)
Original nationality of the parents (ref=both of the parents had Dutch or Belgian nationality)	
Neither of them had Dutch or Belgian nationality	0.137*
	(0.057)
Only one of the parents had Dutch or Belgian nationality at birth	-0.019
	(0.080)
Siblings' international experience (ref=no siblings studied abroad)	
At least one sibling studied abroad	0.034
	(0.051)
Friends abroad (ref=no friends abroad)	
Friends abroad	0.044
	(0.046)
Gender (ref= female)	
Male	0.081
	(0.042)
Study field (ref=Social Sciences)	
Engineering and Technology	0.012
	(0.138)
Humanities	0.005
	(0.056)
Medical and Health Sciences	-0.064
	(0.064)
Natural Sciences	0.025
	(0.083)
University (ref= Vrije Universiteit Amsterdam)	
University of Antwerp	-0.005
	(0.057)
Tilburg University	0.030
	(0.064)
Master	-0.002
	(0.046)
fec1	4.818***
	(0.217)
fec2	4.729***
	(0.217)
fec3	4.247***
	(0.220)
fec4	3.457***
	(0.228)
fec5	4.649***
	(0.217)
Pseudo R^2	0.30

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Discussion and conclusion

In this paper, we investigated the role of foreign language proficiency, use and the number of foreign languages students speak on their study abroad aspirations, as well as the relationship between foreign language knowledge and destination choices. Our analysis of an online survey, conducted with 2,327 students at the University of Antwerp (Belgium), the Vrije Universiteit Amsterdam (Nertherlands), and Tilburg University (Nertherlands) in 2019, leads to the following conclusions.

According to Personal Investment Theory, perception of self and personal language skills is one factor that influences a student's decision to participate in study abroad programs. If students feel confident of their foreign language skills, i.e. evaluate them at the advanced level and use them on a daily basis in the home country, they more willingly engage in activities where a foreign language plays an important role, which is the case of study abroad programs, in which students are exposed both to the language of instruction and also the language of the host country. If they assess their foreign language skills as intermediate and lower and use it less frequently than daily at home, they may see this factor as a barrier and thus decide to refrain from study abroad opportunities. This result is in line with various papers that view language as both a barrier and facilitator of study abroad programs (Beerkens et al. 2016; Findlay et al. 2006; Nilsson 2015; Van Mol and Timmerman 2014). Interestingly, we did not find any statistically significant results in relation to the number of foreign languages students master, which suggests that it is particularly the mastery and use of a foreign language that matters for making study abroad decisions.

Regardless of self-reported language proficiency, use and the number of foreign languages, students demonstrate a strong preference for destination country choices where they

could speak the languages they master, as revealed by our second analysis. In contrast to degree mobility students, who generally put more emphasis on academic issues and career prospects, credit-mobility students tend to be more concerned with personal development (Beerkens et al. 2016; Doyle et al. 2010; Lesjak et al. 2015; Perez-Encinas, Rodriguez-Pomeda, and de Wit 2020). Speaking the language of the destination country can thus help students to increase their social and cultural capital by providing more exposure to the culture and a better understanding of the host country, facilitating interaction with other students, and easing sociocultural adaptation, all of which might be easier if the student could use the language not only during the study process but also outside the university. In addition, knowing the language of the destination country can also help get access to some goods and services, for example, courses that might only be available to those who speak the language of the country. As posited by Personal Investment Theory, whether the students are guided by extrinsic goals such as future career prospects or moving to countries where migration costs are lower, mastery goals aiming to improve their foreign language skills or having a closer contact with the culture of the host country, speaking the language of the destination country can help achieve these aims by facilitating adaptation and immersion into the recipient culture and this is what the students themselves may have in mind when they choose to go to a destination country the language of which they already know.

Finally, we need to mention some limitations of our study. First, we focused on only three universities located in two countries, which are known for their linguistic plurality. As can be seen in the descriptive statistics, most of the respondents in the survey can be characterised by a high level of linguistic capital. A replication of this study in other linguistic contexts would be valuable to assess whether these results are specific to the two case-countries, or whether foreign language proficiency and use play a different role elsewhere. Second, we cannot exclude the possibility of reverse causality between study abroad aspirations and self-reported proficiency levels. As Ożańska-Ponikwia and Carlet (2021) indicate, students who have already decided to

participate in study abroad programs (answer 'yes' in our results) tend to assess their language skills higher than those who do not plan to engage in the program or are having doubts.

In conclusion, foreign language knowledge can be a crucial tool for international students to discover a new country, get new intercultural experiences and grow personally. When students make study abroad decisions, including selecting a destination, they are often partly influenced by their foreign language capital.

Ethics

This survey was reviewed by the ethical board of Tilburg University. All respondents gave their informed consent to use the data for research purposes before accessing the survey.

Data Statement

A data package, containing the base version of the fully anonymised data as well as the working version, syntaxes and anonymised questionnaires of the research project is stored at the Open Science Framework (https://osf.io/). This data package is available upon simple request and will be accessible for a minimum of 10 years.

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Chapter 5. Discussion

The aim of this dissertation was to improve scientific understanding of the role language plays in driving international student mobility, in particular decision-making processes and destination choices, which as this dissertation indicates, remains an underexplored issue. The two empirical studies, presented in Chapters 3 and 4, aimed to fill this gap, by focusing on the influence of language proximity at the macro level and analysing the impact of individual foreign language skills on international students' mobility aspirations and destination choices at the micro level. As shown in Coleman's model (see Section 2.7), societal phenomena can often be explained by focusing on both the micro and macro level. Consequently, the analyses presented in the two empirical chapters aim to complement each other and improve understanding of the role of language as a driver of international student mobility.

5.1 Language Proximity as a Macro-Level Driver of International Student Mobility

The results of the macro-level analysis demonstrate that when analysing the role of language in driving international student flows, we need to go beyond an analysis of the influence of a common language on student migration flows, or a focus on flows to countries in which the most commonly used and studied languages are spoken. This, however, is the approach that has been frequently adopted in previous studies. Although such analyses can shed some light on the role of language as a macro factor driving international student mobility, it does not capture the more complex configurations in which language operates as a driver. This dissertation has shown that linguistic proximity also plays a role in international student destination choices, as revealed by the analysis of international degree-seeking student flows from one country to another in the 21 European Economic Area countries in 2005, 2010, and 2015.

The role played by linguistic proximity on the direction of international student migration flows at the macro-level might reveal a micro-level pattern whereby students choose study abroad destinations with official languages similar to their mother tongue. These languages can

be more easily acquired (Goodman et al., 2008) and thus represent "a more accessible option for studying" (Kingeski & Nadal, 2020). For example, Goodman et al.'s (2008) analysis of destination choices of UK and Spanish students demonstrates that despite the fact that most of the Spanish students in the survey do not speak Italian, they indicate Italy as their first destination choice. As the authors note, even if the students do not claim proficiency in Italian, they do not see it as a barrier as this language can be easily acquired due to its similarity to Spanish. The qualitative analysis of Brazilian students choosing Spain as a study abroad destination by Kingeski and Nadal (2020) also points out linguistic and cultural proximity as the main reason for this destination choice.

My macro-level analysis on the role of language proximity on international students' destination choices provides empirical evidence for these qualitative micro-level observations. According to Human Capital Theory (Becker, 1975), the conceptual framework within which the macro factor analysis (see Chapter 3) was conducted, the decision to move for study purposes to a particular country is made by analysing costs and benefits. Studying in a linguistically close country can be one way for students to increase their human, social and cultural capital and at the same time lower the costs of migration.

Kingeski and Nadal (2020) note that "students seek similarities with their country of origin so that adaptation is as natural as possible" (p. 102). Furthermore, several studies have shown that a smaller distance between one's native language and the official language of the destination country results in a higher level of language proficiency in comparison to speakers coming from linguistically more distant countries (Chiswick & Miller, 2007; Isphording & Otten, 2014). Consequently, deciding to move to a country that is linguistically close might require less cognitive effort from students to learn a new language, which can be beneficial for integrating quickly and easily into a new environment, both at the higher education institution and in the broader receiving society, as well as assisting students' general well-being.

Yang et al.'s (2006) analysis of international students' self-perceived language competence showed that speaking the language of the host country was associated with a general self-confidence in the country which in its turn contributed to the emotional, social and psychological well-being of international students. These results are corroborated by a more recent study by Wilczewski et al. (2022) on international students' experiences in four EU countries and the US. The study demonstrated a direct link between a student's proficiency in the language of the host country, in addition to English, and their psychological adjustment to a new environment. On the contrary, perceived lack of foreign language skills and cultural differences can hinder international students' integration into a local community (Sawir et al., 2012), influence academic performance, and increase stress and other mental problems (Gatwiri, 2015). Although linguistic proximity cannot completely spare an international student from an adaptation period, it can contribute to faster progress in acquiring a host country language and smoother adaptation.

Furthermore, speaking the language of the destination country can help students improve their possible job opportunities in the future, which is particularly relevant for degree seeking students, who were the focus of my macro-level analysis (see Chapter 3). First, they may decide to stay in the country for work-related reasons and consequently use the language at work. Goodman et al. (2008) note that although in their analysis a lower percentage of Spanish students considered working abroad rather than study opportunities, those who did indicated the same destination country as a possible destination. Whether the students change their visa for work-related reasons or return to their home country, there are still economic benefits from knowing languages other than English. For example, Ginsburgh and Prieto (2011) show that not only English but knowledge of other languages such as French, German, Spanish, Dutch, and Italian also translates into higher returns in the workplace.

5.2 Foreign Language Skills as a Micro-Level Driver of International Student Mobility

5.2.1 Destination Choices

Not only linguistic proximity but also a prior knowledge of the language of the host country can contribute to an easier adaptation in the destination country. Whereas the analysis of linguistic proximity focuses on the similarity between official languages of two countries, it does not take into account that students may speak other languages than the official language of their country of origin. The findings of the micro-level study (see Chapter 4) therefore complement the macro-level analysis. They show that not only language as a country-related factor influences international student mobility, but also that individual foreign language skills add an extra layer of complexity. Students often choose destinations in which they have a knowledge of the language. This could be for several reasons, such as more opportunities to practise the language, access to the courses delivered in the language of the country, an ability to use the language outside the university, all of which translate into lower adaptation costs.

These findings are in line with Castillo Arredondo et al. (2018) whose analysis of international students' reasons to choose Spain and Germany as study destinations revealed that language, which in both cases was the language of the country as well as of instruction, played the most important role in attracting students to the respective country. Interestingly, Borghetti and Beaven (2017) found that when students had knowledge of the destination country language in addition to English, they tended to prefer to go to that country even if their proficiency in the said language was lower than the one in English.

Speaking the language of the country can also be a way to achieve other aims. Short-term mobility students typically plan to fulfill other objectives during a study abroad period. These include personal growth, meeting new people, experiencing another culture, and travelling (Beerkens et al., 2016; Castillo Arredondo et al., 2018; Lesjak et al., 2015; Perez-Encinas et al., 2020). By revealing the importance of speaking the language of a country as an attraction factor, the current study thus contributes to the literature analysing short-term international mobility,

which shows the importance of factors such as the cost of living, climate, educational quality, the attractiveness of the city and university premises, tourist sights and so on (Castillo Arredondo et al., 2018; Kosmaczewska, 2020; Lesjak et al., 2015; Perez-Encinas et al., 2020; Rodriguez Gonzalez et al., 2011).

5.2.2 Foreign Language Skills as a Barrier and Facilitator of International Student Mobility

In addition to being a facilitator for study abroad aspirations, the lack of foreign language skills is one of the most frequently cited barriers to participation in study abroad opportunities (Beerkens et al., 2016; Findlay et al., 2006; Van Mol & Timmerman, 2014). The results of the micro-level study (see Chapter 4) suggest that students who evaluate their language skills as intermediate and lower, and who speak a foreign language less often than daily may see their language skills to be insufficient for study abroad opportunities.

The literature overview showed that social, economic and cultural capital of students impacts their study abroad participation (Brooks & Waters, 2020; Findlay et al., 2006; Van Mol, 2021). The results of the present study empirically evidence the importance of linguistic capital in study abroad aspirations as well, which can form part of students' 'mobility capital' (Murphy-Lejeune, 2002). Although this is not what I originally aimed to investigate in this thesis, there might be a link between foreign language skills and family socio-economic background, as students from the families of higher socio-economic standing may have more opportunities to learn and develop their language skills. Gerhards' (2014) comparative study of 27 European countries provides evidence for the link between linguistic and socio-cultural capital as it empirically shows that a respondent's English language proficiency is positively related to their social class and level of education. This may explain why lack of knowledge of foreign language(s) and financial barriers are usually mentioned together as reasons for non-participation (Beerkens et al., 2016; Findlay, 2006).

In addition to socio-economic background, the literature points to gender differences in study abroad programme participation (Findlay et al., 2006; Netz et al., 2020; Van Mol, 2021).

The descriptive statistics of my micro level research also shows that almost twice as many female students considered taking part in study abroad programmes. Hurst's (2019) analysis of these unequal participation rates demonstrates that it is not gender per se but a combination of gender and class that explains why women from higher socio-economic classes are more likely to aspire to study abroad. This difference in female over-representation can also be related to a gender gap in foreign language proficiency. According to a British Council report (British Council, 2020), a student's gender closely correlates with the level of foreign language proficiency, and the effect remains significant after controlling for socio-economic factors. Maternal education has also been found to be of importance in a student's decision to go abroad (Findlay et al., 2006), their role being more significant in the decision-making of female students (Van Mol, 2021). Future research may investigate how social class, parental education, and gender influence student's linguistic capital and via this capital translate into study abroad participation.

Whereas some students perceive language as a barrier, others see their foreign language skills as a facilitator of study abroad participation. The results presented in Chapter 4 indicate that students who assess their language proficiency as advanced and speak a foreign language on a daily basis tend to be more likely to aspire to study abroad. The descriptive statistics in Chapter 4 show that most students in the survey see themselves as advanced daily speakers of a foreign language (78.5% and 53% respectively). A similar situation can be observed with regard to parental education, with 72.2% of students having parents with a university degree (see Chapter 4). Following Gerhards' (2014) findings, not only do students' individual characteristics influence their linguistic capital, but such a macro-level factor as the amount of educational expenditure by the state also plays a positive role. The influence of macro-level factors, namely economic and political context, in study abroad aspirations has also been noted by Brooks and Waters (2020). Section 5.3. will further develop the link between macro and micro levels with regard to the role of language.

Another frequently cited influence of language at the micro level is students' motivation to improve their language skills while studying abroad (Bell, 2016; Castillo Arredondo et al., 2018). Although investigating the link between students' motivations and self-reported foreign language skills was initially beyond the scope of the micro level analysis, as an extra check a simple correlation analysis was performed to address this question. The influence of this factor proved to be more difficult to isolate than expected. In particular, the intuitive idea of a higher importance given to the desire to enhance foreign language skills among students with lower linguistic capital could not be confirmed. More precisely, among students who want or might want to study abroad, no significant correlation between either their self-reported language proficiency, use, or the number of languages they speak, and the importance they give to improving foreign language skills could be observed. These results may suggest that regardless of their foreign language proficiency, students may see short-term study abroad opportunities as a way to enhance their language skills (more than 70% of respondents rated this factor as 'very important' or 'important' according to descriptive statistics presented in Chapter 4).

5.3 Coleman's Boat

The macro and micro analyses presented in the papers found in Chapters 3 and 4 focus on different aspects of the role of language in international student mobility and consider the impact of language within different conceptual frameworks, yet the two approaches are not contradictory. On the contrary, they aim to complement each other by showing how individual and country-level factors intersect.

Following Coleman's diagram (Coleman, 1994, p.12), the overarching conceptual framework of this thesis, analysing how macro-level factors influence individual characteristics and at the same time how micro-level associations affect larger scale trends, is important for a more complete understanding of the phenomenon. Although the data used for this thesis did not allow both levels to be explicitly linked, the diagram still provides a way to think about a

possible connection between the factors operating at the levels of individual and country, and highlight avenues for future research.

Applying Coleman's diagram (see Figure 4) to the macro-level analysis, we can consider the association between language proximity, one of the macro-level factors (mode A) and the direction of student flows (mode D), in which it has been evidenced to play a role. At the micro level, as shown by Chiswick and Miller (2007) and Isphording and Otten (2014) language proximity lowers monetary and non-monetary costs associated with learning a foreign language (mode B). If a student does not speak a foreign language, and in order to avoid costs involved in acquiring a more distant language, they may consider choosing a country whose language is similar to the language of their home country (mode C). A number of such individual decisions could eventually shape outflows from the country. As the role of language proximity in shaping international student flows was only analysed at the macro level, individual students' decision making accounting for other micro-level characteristics, could help better understand this macro-level mechanism and could be a useful focus for future research.

With regard to the foreign language skills of students at an individual level, the language policy of a country, which may manifest itself in a number of official languages or in which foreign languages are taught in schools (mode A), can also be linked to the share of outgoing international students on the total population of the country among students in tertiary education (mode D). At the same time, this language policy in a broad sense may affect individual characteristics of a family, for example, the number of languages spoken at home, or an exposure to other languages in the community (mode B). We know from the analysis presented in Chapter 4 that this in turn may affect motives, needs and opportunities to study abroad (mode C). These individual cases taken together add to the overall number of outgoing students from a country (mode D). For example, countries whose official languages are not characterised by a high communicative value may see more students willing to go abroad to improve their knowledge of hypercentral and supercentral languages (de Swaan, 2001), which may also have been studied at

school. At an individual level, understanding the benefits of speaking these languages, for example in future career prospects, may encourage students to invest more resources into learning a foreign language by taking extra courses, engaging in international projects or study abroad opportunities. Future research can indicate how these macro-level aspects intersect with individual motivations and aspirations.

In sum, both the macro and micro level studies (Chapters 3 and 4) show that speaking the language of the destination country, or being able to acquire it in a short period of time, is an important attraction factor for both degree and credit mobile students as it might facilitate sociocultural adaptation, lower migration costs, allow students to communicate outside the university and thus increase their social opportunities and improve future employment possibilities.

Chapter 6. Conclusions, Recommendations and Future Research

6.1 Academic Contribution of the Study

This research sought to address the overarching research question, 'What role does language play as a driver of international student mobility?' With this aim, it focused on an analysis of the role of language at both macro and micro levels. To expand on the role of language at country level, the paper presented in Chapter 3 (Ovchinnikova et al., 2022) concentrated on analysing the influence of language proximity on degree-seeking student flows among 21 countries of the European Economic Area. This macro-level analysis revealed a significant positive influence of language proximity on degree-seeking student destination choices.

The micro-level study presented in Chapter 4 (Ovchinnikova et al., under review), aimed to complement the findings of the macro-level analysis. It demonstrated how individual foreign language skills could be seen as both a facilitator and barrier of study abroad aspirations depending on short-term mobile students' self-perceived foreign language proficiency and use. Although improving foreign language skills is one of the most popular reasons to engage in education abroad, some students may not use this opportunity if they see their language skills as insufficient to participate in study abroad programmes. The micro-level analysis also revealed that regardless of self-reported foreign language proficiency, students tend to choose potential study abroad destinations among countries whose languages they speak.

This thesis has therefore highlighted the important roles played by language at different stages of the study abroad process, first by showing how the language influences a student's decision on whether to embark on a study abroad programme and, second, which particular destination country to choose.

Language is used to communicate in the destination country both for studying and, more broadly, for living in and experiencing the country. Both the macro and micro level studies (Chapters 3 and 4) have empirically evidenced the importance of the language factor in study

abroad decision-making processes, including destination choices. This research therefore makes an important contribution to the field by

- developing a better understanding of the role of language in international student mobility. The thesis demonstrated that a typical research approach used to analyse the role of language at the macro level does not allow us to capture more subtle influences of language;
- investigating how language proximity and foreign language skills impact international students' aspirations and destination choices, and thus reflecting both of these stages in the decision-making process;
- exploring aspirations of both degree-seeking and credit mobile students in addition to concentrating on both macro and micro level influence of language;
- suggesting a possible explanation for the inter-relationship between macro and micro-level factors.

6.2 Recommendations for Future Policy and Practice

The results suggest that institutions which seek to attract international students for full degrees/diplomas should pay more attention to language support services and offer introductory language courses before students begin their programme to help them learn and increase their competence in the language of the destination country.

Promoting learning mobility and encouraging students to participate in study abroad programmes by supporting language study is one recommendation for higher education institutions which seek to increase the number of outgoing students. As the findings indicated, some students are deterred from study abroad opportunities due to insufficient language skills. Consequently, home institutions may consider offering extra language courses at home, and in cases where introductory language courses are offered in the destination country, these should clearly be announced as part of the encouragement for students to embark on study abroad

programmes. This could be a possible solution to attract more students to study abroad programmes who may find the language barrier a deterrant.

For policy-makers, the findings support several recommendations outlined in the Communication from the Commission on achieving the European Education Area by 2025 (European Commission, 2020). One of the recommendations is "fostering language learning and multilingualism" (p. 6). The results of the micro-level analysis in Chapter 4 (Ovchinnikova et al., under review) show that international students choose destination countries for which they speak the language, regardless of their level of proficiency in that language. Many programmes for short-term mobile students are delivered in English. However, students may choose to go to countries for which they have studied the language earlier at school, or spoken with their parents or friends, showing that there is an interest towards a range of languages. Consequently, the results suggest that foreign language diversity in schools and universities needs to be encouraged.

Another recommendation to foster language learning and multilingualism mentioned in the Communication (European Commission, 2020) is paying more attention to students' linguistic backgrounds and foreign language skills. These factors are important to take into account since the results presented in this thesis show that they influence students' study abroad aspirations, as some students may not feel "sufficiently prepared when it comes to language learning" to participate in learning mobility (ibid, p.6).

Language support for international students can be provided not only at the initiative of a higher education institution, but also at the government level in receiving countries. In this respect it is interesting to mention the example of Canada which does not only organise government-funded French classes for international students, immigrants and permanent citizens, but has also introduced financial incentives to encourage people to sign up for such classes (Gouvernement du Québec, 2022).

6.3. Future Research

Although the importance of the interrelationship between the macro and micro levels of analysis in this study has been adressed in the discussion, the data used for this research did not allow explicit connection between both levels of analysis. Future research may look at how the language policy of a country, for example as expressed in the number of official languages, or those which are taught in schools, influences the linguistic background of a student and their study abroad aspirations. Analysing the link between languages taught at school and international student destination choices may represent another possible development of research into the role of language (Aparicio Fenoll & Kuehn, 2016). Although the current study looked into the role of individual foreign language skills, the connection between the languages students said they spoke and the language policy of the country (which may manifest itself through the languages taught in schools) is only hypothetical.

Another possible avenue for future research could be exploring the role of language proximity at an individual level to better understand a student's decision-making process and both monetary and non-monetary benefits they may associate with moving to a linguistically close country. Language proximity can be connected to easier psychological adaptation in a destination country, but it can also influence time and other financial investments related to learning the language of the destination. Investigating whether language proximity plays a role in short-term student mobility could also provide potential recommendations for policy-makers in Europe in light of the importance placed on schemes such as Erasmus+ and financial support for short-term exchange programmes by the European Union.

Language proximity can also strongly correlate with cultural proximity and reflect historical and cultural contacts between countries. Disentangling this relationship between language and culture is a challenging endeavour that may also be an avenue for future research. One of the ways to delineate the influence of language proximity, which was used in the current macro level analysis (see Chapter 3), is to control for the cross-border network effect which may

also capture the effect of cultural proximity. Other possible approaches for future research would be to include genetic distance, which shows the long-term relatedness between the populations of two countries, as a proxy for cultural similarities (see Adsera & Pytlikova [2015] as an example of this). An alternative would be to control for the difference in cultural values to disentangle the linguistic effect, as in the study by Thissen and Ederveen (2006).

In addition to the limitations mentioned in Chapters 3 and 4, the macro-level analysis focused on degree-seeking students whereas the micro-level analysis was based on the responses of credit mobile students. Future research could reverse this approach and look at whether linguistic proximity is a relevant factor in credit mobility, and whether individual foreign language skills impact degree-seeking students in a similar way as has been shown here for short-term credit mobile students.

This thesis focused on European countries and considered only official languages. Future research may expand to other geographical areas and include common or regional languages into the analysis. For example, Melitz and Toubal's (2014) analysis of the role of language in bilateral trade showed that the linguistic influence is twice as important when not only common official languages between the countries are considered, but also common native languages, common spoken languages, and linguistic proximity are added to the analysis.

6.4 Summary

This thesis has addressed the research question:

What role does language play as a driver of international student mobility?

The two papers in Chapters 3 and 4 have highlighted the important roles language plays at different stages of the study abroad process and addressed the research sub-questions:

- Does language proximity influence destination choices of degree-seeking international students at the macro level?
- What role do individual foreign language skills play in international students' aspirations and destination choices?

Language is used to communicate in the destination country not simply for studying but also, more broadly, for living in and experiencing the country. The macro-level analysis shown in Chapter 3 (Ovchinnikova et al., 2022) exploring the influence of language proximity, and the micro level study in Chapter 4 (Ovchinnikova et al., under review) have empirically evidenced, how language influences a student's decision on whether to embark on a study abroad programme and which particular destination country to choose. The thesis thus makes an important contribution to the field of languages and migration studies by addressing the role of language in driving international student mobility.

7. Personal Reflections

When I was starting my PhD journey, in a world at peace and ignorant of the risks of world-wide pandemic and war, complete commitment and dedication to such a long-term demanding project seemed to be the most challenging part of the endeavour. The PhD has indeed proven to be a challenging process, but at the same time, it has also been a source of inspiration, new discoveries and extensive knowledge. Not least importantly, though I realised it only in hindsight, in the uncertain times following the onset of Covid in 2020 this research has been an anchor which granted me so much required stability, feeling of involvement and control.

I enrolled in the PhD programme in 2019 planning to focus on the topic that united both my personal experience and professional interests. Working with students and managing international student mobility at the New Economic School, I used to talk to many students who considered study abroad opportunities. Language and foreign language competence was often a part of our discussions revolving around their study abroad plans. My personal experience that explains the initial idea for this thesis dates back to 15 years earlier when I was studying in Moscow State Linguistic University and decided to start learning another foreign language, which happened to be Italian after French. Although I knew about the history of language development from the course on language theory, and that some languages were more similar than others, it was the first time I felt how this proximity influenced the process of acquisition. However, it was not until I joined the Center for the Study of Diversity and Social Interactions at the New Economic School that I learnt thanks to Professor Weber and his and Professor Ginsburgh's book 'How many languages do we need?' how language proximity can be measured and I got acquainted with the research devoted to the influence of language on conflict, trade, migration, etc. I was really fascinated by this data and grew curious to see whether language proximity plays a role in students' decision-making.

The second part of my research focuses on the role of foreign language competence in international students' aspirations and destination choices. Despite having a background in

languages, I felt I was less involved in the analysis, adhering more to the positivism approach. Only recently did I realize that on an individual level I am much more immersed into the topic. As an international student, I was guided by a variety of factors in my decision to get a PhD degree abroad and choosing a particular higher education institution. Without going deep into self-analysis, I can say that a foreign language background obviously played an important role in my decision-making. Being able to speak the language of the country - even if not at all proficiently, in addition to the language of instruction, English - seemed an ideal combination. Having studied Italian at university, I was hoping to enhance it during the learning process, the biggest part of which eventually happened to be during the COVID-19 pandemic. The knowledge of the language of the country was linked to cultural exposure, adaptation issues and a generally more full hands-on experience. Had the programme been fully in Italian, I might have been deterred from joining it due to lack of confidence in my language competence.

This is one among the many discoveries I made during the research process. The PhD journey prompted me to discover new theories and concepts from different fields and acquire new skills. Although I initially thought I would be researching the topic that I was already familiar with since foreign languages and international student mobility have been part of my personal and professional life for years, the PhD journey has proven to be a truly interdisciplinary experience where linguistic and international studies intersected with sociological and psychological conceptual frameworks, economic theories and quantitative research methods. This interdisciplinary nature of the research made me value even more a collaborative approach. Although one usually imagines the research process to be a lonely process, and this is what it definitely is at most periods, for me it also turned out to be a process of collaboration and collective efforts full of stimulating discussions, assistance and recommendations from people with diverse academic backgrounds and representing various scientific disciplines, be it my academic advisors or the broader scientific community.

One may always remember the very first feedback they receive at the start of their PhD journey. Mine from one of my academic advisors-to-be was “This research idea is compelling but hardly doable in three years”. Although the initial idea required some significant alterations, the research had to be narrowed down to acquire a clearer focus, and the initially ambitious goal was balanced by (in some moments adopted with a lot of pain and resistance) ‘we need to make a stop here’ approach, three years later the research still seems to me as compelling as back then even though it is now almost completed.

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9. Appendices

9.1 Ethical Approval

TILBURG UNIVERSITY

SCHOOL OF SOCIAL AND BEHAVIORAL SCIENCES
ETHICS REVIEW BOARD

Department of Sociology
Dr. C. Van Mol

Dear Dr. Van Mol,

Date
25 March 2019

Subject
Review research proposal

Date of your letter
8 March 2019

Reference
EC-2019.36

Telephone
013 466 3301

E-mail
erb@tilburguniversity.edu

The Ethics Review Board (ERB) has discussed your research proposal *Internationalisation at Tilburg University and the University of Antwerp* and approves of the research protocol. There are no ethical concerns, so you are allowed to execute your research.

The Board wants to draw your attention to the terms and conditions in the appendix.

If changes are made to the research protocol, you need to submit an amendment to obtain ethics approval again.

Sincerely,

Dr. J.J.P. (Jolanda) Mathijssen
Chair Ethics Review Board

Attachment(s)
1

The ERB retains the right to at any time revise its decision regarding the implementation and the WMO status of any research study in response to changing regulations, research activities, or other unforeseen circumstances that are relevant to reviewing any such study. The ERB shall notify the principal researcher of its revised decision and of the reason or reasons for having revised its decision. (WMO: Wet medisch-wetenschappelijk onderzoek met mensen, Medical Research (Human Subjects) Act)

P.O. Box 90153 • 5000 LE Tilburg • The Netherlands • Visiting address > Warandelaan 2 • Tilburg • Telephone +31 13 466 91 11
www.tilburguniversity.edu

Reference
EC-2019.36

APPENDIX 1

Terms and conditions

Validity assessment:
The positive decision will lose its validity if the inclusion of the first subject has not taken place within one year after this decision was taken.

Amendments:
Amendments must be submitted to the ERB.

Privacy:
The ERB would like to point out to the researcher that collecting information (encrypted) that can be traced back to any person can be subject to the General Data Protection Regulation. If, in the context of scientific research and statistics, fully or partially automated personal data files are created, the main rule is that these files must be reported to the Dutch Data protection Authority (DPA). Please contact the Privacy Officer (Executive Services Tilburg University). For more information see: https://www.tilburguniversity.edu/intranet/support-facilities/legal/legalprotection/privacy/research

9.2 Questionnaire

Internationalisation at Vrije Universiteit Amsterdam, Tilburg University and University of Antwerp

Start of Block: Introduction

Q125 **Internationalisation at Vrije Universiteit Amsterdam, Tilburg University and the University of Antwerp** We are researchers and practitioners at the Vrije Universiteit Amsterdam, Tilburg University and the University of Antwerp. Currently, we are involved in a research project that aims to investigate how students experience the internationalisation of higher education, as well as barriers and access to internationalisation activities, both at home and/or abroad. The project aims for both scientific output as well as practical output, such as tailoring internationalisation activities better to students' needs.

By sharing your experiences with us through this survey you make our research project possible. It is, however, important to guarantee you that everything you will answer will be made completely anonymous and confidentiality of the data collected will also be our absolute priority. The information you share will not be shared with third parties. We expect the survey to last around 25 minutes. During the survey, we will discuss your personal background, (possible) international experiences, social networks, motivations for studying and future outlooks. We would like to highlight that you are not obliged to answer all the questions if you do not feel comfortable with them, and of course, you can choose to stop the survey at any point. After the survey took place, you can always contact the principal researcher, Christof Van Mol (see contact details below) to discuss any issues about the survey and its use at any time during the research process. You can also withdraw from the research process at any time. Your answers can be used in some of our research outputs (e.g. articles, conference papers, or presentations) or practical outputs (e.g. institutional reports), but this information will always be made anonymous to ensure no traceability between the presented data and yourself. The data will be stored for 10 years, and the anonymous data will be used for scientific publications over the next 5 years as well as three research reports for the International Offices of Vrije Universiteit Amsterdam, Tilburg University and the University of Antwerp in 2019. The project has been approved by the Ethical Review Board of Tilburg University. If you have any remarks or complaints regarding this research, you may also contact the Ethics Review Board of Tilburg School of Social and Behavioral Sciences via ERB@tilburguniversity.edu. Do not hesitate to ask us any question before, during or after the survey. We are also very happy to share our findings with you at the end of the project if you are interested. At the end of the survey, you will be able to leave your email address for this purpose. In case you are not willing to participate but you are interested in hearing more about the results of this study, please contact us by email (see contact details below). Sincerely, Dr. Christof Van Mol, Assistant Professor Tilburg

University, Department of Sociology, C.VanMol@uvt.nl
Ms. Sanne Boomsma, International Office Vrije Universiteit Amsterdam Mr. Tim Berckmans, International Office University of Antwerp Ms. Sara Bervoets, International Office University of Antwerp Mr. Wannes Gijsels, International Office University of Antwerp Ms. Zarrea Plaisier, International Office Tilburg University Ms. Linda van der Tuijn, International Office Tilburg University Ms. Petra Bergsma, International Office Tilburg University

Q127 Online participant consent form

☐ By accessing this survey, I confirm that I have read the information sheet; I have had the opportunity to ask questions about the study and I have received satisfactory answers to these questions, and any additional details requested. I understand my answers will be stored and encrypted for 10 years unless I request this cannot be done; I understand that I may withdraw from the study without penalty at any time by advising the researchers of this decision; I understand my data will be anonymously used for scientific publications over the next 5 years, as well as three research reports for the international offices in 2019. (1)

End of Block: Introduction

Start of Block: A. Background

A01 At which university do you study?

○ University of Antwerp (8)

○ Tilburg University (9)

○ Vrije Universiteit Amsterdam (10)

Display This Question:
If At which university do you study? = University of Antwerp

A02a At which faculty do you study?

▼ Applied Engineering (17) ... Not applicable (31)

Display This Question:
If At which university do you study? = Tilburg University

A02b At which faculty do you study?

▼ Tilburg School of Economics and Management (500) ... Not applicable (506)

Display This Question:
If At which university do you study? = Vrije Universiteit Amsterdam

A02c At which faculty do you study?

▼ Amsterdam University College (500) ... Not applicable (511)

Display This Question:
If At which university do you study? = Tilburg University
Or At which university do you study? = Vrije Universiteit Amsterdam

A03b Which type of course programme are you pursuing?

- ○ Bachelor's (1)
- ○ Pre-Master (2)
- ○ Master's (3)
- ○ Other (4) _____

Display This Question:
If At which university do you study? = Tilburg University
And Which type of course programme are you pursuing? = Bachelor's
And At which faculty do you study? = Tilburg School of Economics and Management

T1 Which course programme are you enrolled in?

- ○ Business Economics (1)
- ○ Economics and Business Economics (2)
- ○ International Business Administration (3)
- ○ Economics (4)
- ○ Fiscal Economics (5)
- ○ Econometrics and Operations Research (6)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Bachelor's

And At which faculty do you study? = Faculty of Sciences

Q184 Which course programme are you enrolled in?

- Aarde en Economie/Earth Sciences and Economics (1)
- Aardwetenschappen/Earth Sciences (2)
- Artificial Intelligence (3)
- Biologie/Biology (4)
- Biomedical Sciences (5)
- Business Analytics (6)
- Computer Science (7)
- Farmaceutische Wetenschappen/Pharmaceutical Sciences (8)
- Gezondheid en Leven/Health and Life Sciences (9)
- Gezondheidswetenschappen/Health Sciences (10)
- Informatie, Multimedia en Management/Information, Multimedia and Management (11)
- Mathematics (12)
- Medische Natuurwetenschappen/Medical Natural Sciences (13)
- Natuur- en Sterrenkunde/Physics and Astronomy (14)
- Scheikunde/Chemistry (15)
- Science, Business and Innovation (16)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = Faculty of Sciences

Q185 Which course programme are you enrolled in?

- ○ Bioinformatics (1)
- ○ Bioinformatics and Systems Biology (2)
- ○ Biomedical Sciences (3)
- ○ Biomolecular Sciences (4)
- ○ Business Analytics (5)
- ○ Chemistry (6)
- ○ Computational Science (7)
- ○ Computer Science (8)
- ○ Drug Discovery and Safety (9)
- ○ Earth Sciences (10)
- ○ Ecology (11)
- ○ Environment and Resource Management (12)
- ○ Global Health (research) (13)
- ○ Health Sciences (14)
- ○ Hydrology (15)
- ○ Information Sciences (16)
- ○ Management, Policy Analysis and Entrepreneurship in the Health and Life Sciences (19)
- ○ Mathematics (20)
- ○ Medical Natural Sciences (21)
- ○ Neurosciences (research) (22)

- ○ Parallel and Distributed Computer Systems (23)
- ○ Physics (24)
- ○ Physics and Astronomy (25)
- ○ Science, Business and Innovation (26)
- ○ Stochastics and Financial Mathematics (27)

Display This Question:
If At which university do you study? = Vrije Universiteit Amsterdam
And Which type of course programme are you pursuing? = Bachelor's
And At which faculty do you study? = Faculty of Behavioural and Movement Sciences

Q186 Which course programme are you enrolled in?

- ○ Bewegingswetenschappen/Human Movement Sciences (1)
- ○ Pedagogische Wetenschappen/Pedagogical Sciences (2)
- ○ Psychologie/Psychology (3)

Display This Question:
If At which university do you study? = Vrije Universiteit Amsterdam
And Which type of course programme are you pursuing? = Master's
And At which faculty do you study? = Faculty of Behavioural and Movement Sciences

Q187 Which course programme are you enrolled in?

- ○ Clinical and Developmental Psychopathology (1)
- ○ Cognitive Neuropsychology (2)
- ○ Genes in Behaviour and Health (3)
- ○ Human Movement Sciences: Sport, Exercise and Health (28)
- ○ Human Movement Sciences: Sport, Exercise and Health (research) (29)
- ○ Leraar Voorbereidend Hoger Onderwijs in Aardrijkskunde (30)
- ○ Leraar Voorbereidend Hoger Onderwijs in Algemene Economie (31)
- ○ Leraar Voorbereidend Hoger Onderwijs in Biologie (32)
- ○ Leraar Voorbereidend Hoger Onderwijs in de Bètawetenschappen/Science Teaching in Secondary Education (33)
- ○ Leraar Voorbereidend Hoger Onderwijs in de Mens- en Maatschappijwetenschappen/Teaching Social Sciences and Humanities in Secondary Education (34)
- ○ Leraar Voorbereidend Hoger Onderwijs in de Taal en Cultuurwetenschappen/Language Teaching in Secondary Education (35)
- ○ Leraar Voorbereidend Hoger Onderwijs in Duits (36)
- ○ Leraar Voorbereidend Hoger Onderwijs in Engels (37)
- ○ Leraar Voorbereidend Hoger Onderwijs in Frans (38)
- ○ Leraar Voorbereidend Hoger Onderwijs in Geschiedenis en Staatsinrichting (39)
- ○ Leraar Voorbereidend Hoger Onderwijs in Godsdienst en Levensbeschouwing (40)
- ○ Leraar Voorbereidend Hoger Onderwijs in Griekse en Latijnse Taal en Cultuur (41)
- ○ Leraar Voorbereidend Hoger Onderwijs in Latijnse Taal en Cultuur (42)
- ○ Leraar Voorbereidend Hoger Onderwijs in Maatschappijleer en Maatschappijwetenschappen (43)

- Leraar Voorbereidend Hoger Onderwijs in Management en Organisatie (44)
- Leraar Voorbereidend Hoger Onderwijs in Natuurkunde (45)
- Leraar Voorbereidend Hoger Onderwijs in Scheikunde (46)
- Leraar Voorbereidend Hoger Onderwijs in Wiskunde (47)
- Musculoskeletal Physiotherapy Sciences (48)
- Pedagogische Wetenschappen/Pedagogical Sciences (49)
- Psychologie/Psychology (50)
- Social Psychology: Regulation of Social Behaviour (research) (51)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Bachelor's

And At which faculty do you study? = Faculty of Humanities

Q188 Which course programme are you enrolled in?

- ○ Archeologie/Archaeology (1)
- ○ Communicatie- en Informatiewetenschappen/Communication and Information Studies (2)
- ○ Filosofie/Philosophy (3)
- ○ Geschiedenis/History (28)
- ○ Griekse en Latijnse Taal en Cultuur/Greek and Latin Languages and Cultures (29)
- ○ Literatuur en Samenleving/Literature and Society (30)
- ○ Media, Kunst, Design en Architectuur/Media, Art, Design and Architecture (31)
- ○ Oudheidwetenschappen/Ancient Studies (52)
- ○ Philosophy, Politics and Economics (53)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = Faculty of Humanities

Q189 Which course programme are you enrolled in?

- ○ Archeologie/Archaeology (1)
- ○ Communicatie- en Informatiewetenschappen/Communication and Information Studies (2)
- ○ Educatie in de Taal- en Cultuurwetenschappen/Language and Culture Education (3)
- ○ Erfgoedstudies/Heritage Studies (28)
- ○ Filosofie/Philosophy (29)
- ○ Geschiedenis/History (30)
- ○ Geschiedenis/History (research) (31)
- ○ Humanities (research) (52)
- ○ Kunst- & Cultuurwetenschappen/Arts & Culture (53)
- ○ Kunst- en Cultuurwetenschappen/Arts & Culture (research) (54)
- ○ Letterkunde/Literary Studies (55)
- ○ Letterkunde/Literary Studies (research) (56)
- ○ Oudheidstudies/Classics & Ancient Civilizations (57)
- ○ Oudheidstudies/Classics & Ancient Civilizations (research) (58)
- ○ Taalwetenschappen/Linguistics (59)
- ○ Taalwetenschappen/Linguistics (research) (60)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Bachelor's

And At which faculty do you study? = Faculty of Law

Q190 Which course programme are you enrolled in?

- ○ Criminologie/Criminology (1)
- ○ Notarieel Recht/Notarial Law (2)
- ○ Rechtsgeleerdheid/Law (3)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam
And Which type of course programme are you pursuing? = Master's
And At which faculty do you study? = Faculty of Law

Q191 Which course programme are you enrolled in?

- ○ Criminologie/Criminology (1)
- ○ Fiscaal Recht/Tax Law (2)
- ○ International Business Law (3)
- ○ International Crimes, Conflict and Criminology (61)
- ○ Law and Politics of International Security (62)
- ○ Notarieel Recht/Notarial Law (63)
- ○ Ondernemingsrecht/Corporate Law (64)
- ○ Rechtsgeleerdheid/Law (65)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam
And Which type of course programme are you pursuing? = Bachelor's
And At which faculty do you study? = Faculty of Religion and Theology

Q192 Which course programme are you enrolled in?

- ○ Religiewetenschappen/Religious Studies (1)
- ○ Theologie/Theology (2)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = Faculty of Religion and Theology

Q193 Which course programme are you enrolled in?

- ○ Theologie & Religiewetenschappen/Theology & Religious Studies (1)
- ○ Theologie & Religiewetenschappen/Theology & Religious Studies (research) (2)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Bachelor's

And At which faculty do you study? = Faculty of Social Sciences

Q194 Which course programme are you enrolled in?

- ○ Bestuur- en Organisatiewetenschappen/Public Administration and Organization Science (1)
- ○ Communicatiewetenschap/Communication Science (2)
- ○ Culturele Antropologie en Ontwikkelingssociologie/Cultural Anthropology and Development Sociology (66)
- ○ Politicologie/Political Science (67)
- ○ Sociologie/Sociology (68)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = Faculty of Social Sciences

Q195 Which course programme are you enrolled in?

- ○ Beleid, Communicatie en Organisatie/Policy, Communication and Organization (1)
- ○ Bestuurskunde/Public Administration (2)
- ○ Communicatiewetenschap/Communication Science (66)
- ○ Culture, Organization and Management (67)
- ○ Educatie in de Mens- en Maatschappijwetenschappen (68)
- ○ Political Science (69)
- ○ Social and Cultural Anthropology (70)
- ○ Sociologie/Sociology (71)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Bachelor's

And At which faculty do you study? = School of Business and Economics

Q196 Which course programme are you enrolled in?

- ○ Bedrijfskunde/Business Administration (1)
- ○ Econometrie en Operationele Research/Econometrics and Operations Research (72)
- ○ Economie en Bedrijfseconomie/Economics and Business Economics (73)
- ○ International Business Administration (74)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = School of Business and Economics

Q197 Which course programme are you enrolled in?

- ○ Accounting and Control (1)
- ○ Business Administration (72)
- ○ Business in Society (research) (73)
- ○ Econometrics and Operations Research (74)
- ○ Economics (75)
- ○ Entrepreneurship (76)
- ○ Finance (77)
- ○ Marketing (78)
- ○ Spatial, Transport and Environmental Economics (79)
- ○ Tinbergen Institute Master of Philosophy in Economics (research) (80)

Display This Question:

If At which university do you study? = Vrije Universiteit Amsterdam

And Which type of course programme are you pursuing? = Master's

And At which faculty do you study? = VUmc School of Medical Sciences

Q198 Which course programme are you enrolled in?

- ○ Oncology (1)
- ○ Geneeskunde/Medicine (72)
- ○ Cardiovascular Research (research) (73)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Economics and Management

And Which type of course programme are you pursuing? = Master's

T2 Which course programme are you enrolled in?

- ○ Finance (1)
- ○ Information Management (2)
- ○ Econometrics and Mathematical Economics (3)
- ○ Business Analytics and Operations Research (4)
- ○ Quantitative Finance and Actuarial Science (5)
- ○ Accountancy (6)
- ○ Marketing Management (7)
- ○ Marketing Analytics (8)
- ○ Strategic Management (9)
- ○ Supply Chain Management (10)
- ○ International Management (11)
- ○ Data Science and Entrepreneurship (joint degree) (12)
- ○ Economics (13)
- ○ Fiscal Economics (14)
- ○ Teacher Training in Economics (15)
- ○ Teacher Training in Management and Organization (16)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Economics and Management

And Which type of course programme are you pursuing? = Pre-Master

T3 Which course programme are you enrolled in?

- ○ Academic premaster (1)
- ○ Accountancy (HBO) (2)
- ○ Accountancy international students (3)
- ○ Data Science (4)
- ○ Finance (5)
- ○ Fiscal Economics and International Business Taxation (6)
- ○ Information Management (7)
- ○ International Management (8)
- ○ International Management international students (9)
- ○ Marketing Analytics (10)
- ○ Marketing Management (11)
- ○ Strategic Management (12)
- ○ Supply Chain Management (13)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg Law School

And Which type of course programme are you pursuing? = Bachelor's

T5 Which course programme are you enrolled in?

- ○ Law (1)
- ○ Data Science (joint degree) (2)
- ○ Global Law (3)
- ○ Public Governance (4)
- ○ Tax Law (5)

Display This Question:
If At which university do you study? = Tilburg University
And At which faculty do you study? = Tilburg Law School
And Which type of course programme are you pursuing? = Master's

T6 Which course programme are you enrolled in?

- ○ Law and Technology (1)
- ○ Social law and social politics (2)
- ○ International Business Law (3)
- ○ Law (4)
- ○ International and European Law (5)
- ○ Business Law (6)
- ○ International Business Taxation (7)
- ○ Public Governance (8)
- ○ Victimology and Criminal Justice (9)
- ○ Tax Law (10)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg Law School

And Which type of course programme are you pursuing? = Pre-Master

T7 Which course programme are you enrolled in?

- ○ Public Governance (1)
- ○ Tax Law (2)
- ○ International and European Law (3)
- ○ International Business Law (4)
- ○ International Business Taxation (5)
- ○ Law and Technology (6)
- ○ Business Law (7)
- ○ Law (8)
- ○ Register van Belastingadviseurs (9)
- ○ Social Law and Social Politics (10)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Social and Behavioural Sciences

And Which type of course programme are you pursuing? = Bachelor's

T8 Which course programme are you enrolled in?

- ○ Organisation Sciences (1)
- ○ Global Management of Social Issues (2)
- ○ Human Resource Studies (3)
- ○ Human Resource Studies: People Management (4)
- ○ Sociology (5)
- ○ International Sociology (6)
- ○ Psychology (English) (7)
- ○ Psychology (Dutch) (8)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Social and Behavioural Sciences

And Which type of course programme are you pursuing? = Master's

T9 Which course programme are you enrolled in?

- ○ Human Resource Studies (1)
- ○ Psychology and Mental Health (2)
- ○ Social Psychology (3)
- ○ Social and Behavioural Sciences (research) (4)
- ○ Organization Studies (5)
- ○ Medical Psychology (6)
- ○ Sociology (7)
- ○ Teaching Social Sciences and Humanities in Secondary Education (8)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Social and Behavioural Sciences

And Which type of course programme are you pursuing? = Pre-Master

T10 Which course programme are you enrolled in?

- ○ Human Resource Studies (1)
- ○ Teacher Training Social Studies (2)
- ○ Medical Psychology (3)
- ○ Organization Studies (4)
- ○ Psychology and Mental Health (5)
- ○ Social Psychology (6)
- ○ Sociology (7)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Humanities and Digital Sciences

And Which type of course programme are you pursuing? = Bachelor's

T11 Which course programme are you enrolled in?

- ○ B Liberal Arts and Sciences (1)
- ○ B Filosofie (2)
- ○ B Algemene Cultuurwetenschappen (3)
- ○ B Communicatie- en Informatiewetenschappen (4)
- ○ B Cognitive Science and Artificial Intelligence (5)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Humanities and Digital Sciences

And Which type of course programme are you pursuing? = Master's

T12 Which course programme are you enrolled in?

- ○ M Kunst- & Cultuurwetenschappen (1)
- ○ M Filosofie (2)
- ○ M Communicatie- & Informatiewetenschappen (3)
- ○ M Leraar Voorbereidend Hoger Onderwijs in Filosofie (4)
- ○ M Leraar Voorbereidend Hoger Onderwijs in Nederlands (5)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Humanities and Digital Sciences

And Which type of course programme are you pursuing? = Pre-Master

T13 Which course programme are you enrolled in?

- PM Arts, Media and Society (1)
- PM CIW: BEDM, NMD, CC (2)
- PM CIW: Cognitive Science and Artificial Intelligence (3)
- PM CIW: Data Science and Society (4)
- PM CIW: DSBG, CSAI (5)
- PM Communicatie- & Informatiewetenschappen (6)
- PM Ethiek van Bedrijf en Organisatie (7)
- PM Global Communication (8)
- PM Jeugdliteratuur (9)
- PM Leraar Voorbereidend Hoger Onderwijs in Filosofie (10)
- PM Leraar Voorbereidend Hoger Onderwijs in Nederlands (11)
- PM Management of Cultural Diversity (12)
- PM Philosophy of Contemporary Challenges (13)
- PM Philosophy of Humanity and Culture (14)
- PM Philosophy, Science and Society (15)
- PM Ritual in Society (16)

Display This Question:

If At which university do you study? = Tilburg University

And At which faculty do you study? = Tilburg School of Catholic Theology

And Which type of course programme are you pursuing? = Bachelor's

T14 Which course programme are you enrolled in?

- ○ B Theologie (1)

Display This Question:
If At which university do you study? = Tilburg University
And At which faculty do you study? = Tilburg School of Catholic Theology
And Which type of course programme are you pursuing? = Master's

T15 Which course programme are you enrolled in?

- ○ M Theologie (1)
- ○ M Theologie & Religiewetenschappen (2)
- ○ M Opleiding tot leraar voortgezet onderwijs van de eerste graad in Godsdienst en Levensbeschouwing (3)

Display This Question:
If At which university do you study? = Tilburg University
And At which faculty do you study? = Tilburg School of Catholic Theology
And Which type of course programme are you pursuing? = Pre-Master

T16 Which course programme are you enrolled in?

- ○ PM Christianity and Society (1)
- ○ PM Leraar VO 1e graads Godsdienst en Levensbeschouwing (2)
- ○ PM Theologie (3)

Display This Question:
If At which university do you study? = University of Antwerp

A03a Which type of course programme are you pursuing?
* If two options apply, please select the prevailing programme with most ECTS credits

- ○ Bachelor (20)
- ○ Master (21)
- ○ Advanced Master (22)
- ○ Postgraduate (e.g. PhD) (23)
- ○ Bridging programme (24)
- ○ Preparatory programme (25)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Pharmaceutical, Biomedical and Veterinary Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04a Which course programme are you enrolled in?
* If two options apply, please select the prevailing programme with most ECTS credits

- ○ Bachelor of Biochemistry and Biotechnology (1)
- ○ Bachelor of Biomedical Sciences (2)
- ○ Bachelor of Veterinary Medicine (3)
- ○ Bachelor of Pharmaceutical Sciences (4)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Medicine and Health Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04b Which course programme are you enrolled in?

- ○ Bachelor of Medicine (1)
- ○ Bachelor of Rehabilitation Sciences and Physiotherapy (2)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Arts

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04c Which course programme are you enrolled in?

- ○ Bachelor of History (1)
- ○ Bachelor of Linguistics and Literature (2)
- ○ Bachelor of Applied Linguistics (3)
- ○ Bachelor of Philosophy (4)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Design Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04d Which course programme are you enrolled in?

- ○ Bachelor of Architecture (1)
- ○ Bachelor of Conservation and Restoration (2)
- ○ Bachelor of Interior Architecture (3)
- ○ Bachelor of Product Development (4)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Law

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04e Which course programme are you enrolled in?

- ○ Bachelor of Law (1)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Social Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04f Which course programme are you enrolled in?

- ○ Bachelor of Communication Studies (1)
- ○ Bachelor of Political Sciences (2)
- ○ Bachelor of Sociology (3)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Business and Economics

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04g Which course programme are you enrolled in?

- ○ Bachelor of Applied Economics: Business Economics (1)
- ○ Bachelor of Applied Economics: Economic Policy (2)
- ○ Bachelor of Business Engineering (3)
- ○ Bachelor of Business Engineering: Management Information Systems (4)
- ○ Bachelor of Social and Economic Sciences (5)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Applied Engineering

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04h Which course programme are you enrolled in?

- ○ Bachelor of Applied Engineering (1)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Science

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bachelor*

A04i Which course programme are you enrolled in?

- ○ Bachelor of Bioscience Engineering (1)
- ○ Bachelor of Biology (2)
- ○ Bachelor of Chemistry (3)
- ○ Bachelor of Physics (4)
- ○ Bachelor of Computer Science (5)
- ○ Bachelor of Mathematics (6)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Pharmaceutical, Biomedical and Veterinary Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04j Which course programme are you enrolled in?

- ○ Bridging programme Biomedical Sciences (1)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Medicine and Health Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04k Which course programme are you enrolled in?

- ○ Bridging programme Nursing and Midwifery (1)
- ○ Bridging programme Epidemiology (2)
- ○ Bridging programme Rehabilitation Sciences and Physiotherapy (3)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Arts

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04l Which course programme are you enrolled in?

- ○ Bridging programme History (1)
- ○ Bridging Programme Multilingual Professional Communication (2)
- ○ Bridging Programme Linguistics and Literature (3)
- ○ Bridging Programme Theatre and Film Studies (4)
- ○ Bridging programme Interpreting (5)
- ○ Bridging Programme Translation (6)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Design Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04m Which course programme are you enrolled in?

- ○ Bridging programme architecture (1)
- ○ Bridging programme Heritage Studies (2)
- ○ Bridging programme Interior Architecture (3)
- ○ Bridging programme Product Development (4)
- ○ Bridging programme Urbanism and Spatial Planning (5)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Law

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04n Which course programme are you enrolled in?

- ○ Bridging programme laws (1)
- ○ Bridging programme security studies (2)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Social Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04o Which course programme are you enrolled in?

- ○ Bridging programme Communication Studies (1)
- ○ Bridging programme Film Studies and Visual Culture (2)
- ○ Bridging programme International Relations and Diplomacy (3)
- ○ Bridging programme Instructional and Educational Sciences (4)
- ○ Bridging programme Political Communication (5)
- ○ Bridging Programme Political Science (6)
- ○ Bridging Programme Social Work (7)
- ○ Bridging Programme Sociology (8)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Business and Economics

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04p which course programme are you enrolled in?

- ○ Bridging programme Culture Management (1)
- ○ Bridging programme Maritime Sciences (2)
- ○ Bridging programme Organisation and Management (3)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Applied Engineering

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04q Which course programme are you enrolled in?

- ○ Bridging programme Biochemical Engineering Technology (1)
- ○ Bridging programme Chemical Engineering Technology (2)
- ○ Bridging programme Electromechanical Engineering Technology (3)
- ○ Bridging programme Electronics and ICT Engineering Technology (4)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Science

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Bridging programme*

A04r Which course programme are you enrolled in?

- ○ Bridging programme Environmental Science (1)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Pharmaceutical, Biomedical and Veterinary Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04s Which course programme are you enrolled in?

- ○ Master of Biochemistry and Biotechnology (1)
- ○ Master of Biomedical Sciences (2)
- ○ Master of Pharmaceutical Care (3)
- ○ Master of Drug Development: Pharmacist (4)
- ○ Master of Leading International Vaccinology Education (Erasmus Mundus) (5)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Medicine and Health Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04t Which course programme are you enrolled in?

- ○ Master of Epidemiology (1)
- ○ Master of Ergotherapeutic Science (2)
- ○ Master of Medicine (3)
- ○ Master of Rehabilitation Sciences and Physiotherapy (4)
- ○ Master of Nursing and Midwifery (5)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Arts

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04u Which course programme are you enrolled in?

- Master of Archival Science: Cultural Heritage and Records Management (1)
- Master of History (2)
- Master of Multilingual Professional Communication (3)
- Master of Linguistics and Literature (4)
- Master of Linguistics (5)
- Master of Theater and Movie Sciences (6)
- Master of Interpreting (7)
- Master of Translation (8)
- Master of Philosophy (9)
- Research Master of Philosophy (10)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Design Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04v Which course programme are you enrolled in?

- ○ Master of Architecture (1)
- ○ Master of Conservation-Restoration (2)
- ○ Master of Heritage Studies (3)
- ○ Master of Interior Architecture (4)
- ○ Master of Product Development (5)
- ○ Master of Urbanism and Spatial Planning (6)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Law

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04w Which course programme are you enrolled in?

- ○ Master of Law (1)
- ○ Master of Safety Sciences (2)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Social Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04x Which course programme are you enrolled in?

- ○ Master of Communication Studies (1)
- ○ Master of Film Studies and Visual Culture (2)
- ○ Master of Gender and Diversity (3)
- ○ Master of International Relations and Diplomacy (4)
- ○ Master of Instructional and Educational Sciences (5)
- ○ Master of Political Communication (6)
- ○ Master of Political Science (7)
- ○ Master of Social and Economic Sciences (8)
- ○ Master of Social Work (9)
- ○ Master of Sociology (10)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Business and Economics

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04y Which course programme are you enrolled in?

- ○ Master of Applied Economic Sciences: Business Economics (1)
- ○ Master of Applied Economic Sciences: Economic Policy (2)
- ○ Master of Culture Management (3)
- ○ Master of Maritime Sciences (4)
- ○ Master of Management and Organisation (5)
- ○ Master of Applied Economics: Business Economics (6)
- ○ Master of Applied Economics: Economic Policy (7)
- ○ Master of Business Engineering (8)
- ○ Master of Business Engineering: Management Information Systems (9)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Applied Engineering

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04z Which course programme are you enrolled in?

- ○ Master of Biochemistry and Biotechnology (1)
- ○ Master of Civil Engineering Technology (2)
- ○ Master of Chemistry (3)
- ○ Master of Electromechanical Engineering Technology (4)
- ○ Master of Electronics and ICT Engineering Technology (5)
- ○ Master of Sustainable Automotive Engineering (6)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Science

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A04z1 Which course programme are you enrolled in?

- ○ Master of Biology (1)
- ○ Master of Chemistry (2)
- ○ Master of Computer Science (3)
- ○ Master of Physics (4)
- ○ Master of Marine and Lacustrine Science and Management (Interuniversitair) (5)
- ○ Master of Environmental Science (6)
- ○ Master of Mathematics (7)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Pharmaceutical, Biomedical and Veterinary Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z2 Which course programme are you enrolled in?

- ○ Advanced master of Industrial Pharmacy (1)
- ○ Advanced master of Laboratory Medicine (2)
- ○ Advanced master of Hospital Pharmacy (3)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Medicine and Health Sciences

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z3 Which course programme are you enrolled in?

- ○ Advanced master of Occupational Medicine (1)
- ○ Advanced master of Family Medicine (2)
- ○ Advanced master of Youth Health Care (3)
- ○ Advanced master of Specialist Medicine (4)
- ○ Advanced master of Insurance Medicine and Medico-legal Expertise (5)
- ○ Advanced master of Hospital Hygiene (6)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Institute of Development Policy (IOB)

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z4 Which course programme are you enrolled in?

- ○ Advanced Master of Development Evaluation and Management (1)
- ○ Advanced Master of Globalisation and Development (2)
- ○ Advanced Master of Governance and Development (3)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Arts

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z5 Which course programme are you enrolled in?

- ○ Advanced master of Literary Studies (1)
- ○ Advanced Master of Advanced Studies in Linguistics (2)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Business and Economics

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z7 Which course programme are you enrolled in?

- ○ Advanced Master of Economics of Globalisation and European Integration (1)
- ○ Advanced Master in the Maritime Sciences (2)
- ○ Advanced Master of Maritime and Transport Law (3)
- ○ Advanced Master of Maritime and Air Transport Management (4)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Law

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z6 Which course programme are you enrolled in?

- ○ Advanced master of Tax Law (1)
- ○ Advanced master of Business Law (2)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Science

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Advanced Master*

A04z8 Which course programme are you enrolled in?

- ○ Advanced Master of Technology for Integrated Water Management (1)

Display This Question:

If At which university do you study? = University of Antwerp

And At which faculty do you study? = Antwerp School of Education

A04z9 Which course programme are you enrolled in?

- SLO exacte wetenschappen: biologie (1)
- SLO exacte wetenschappen: chemie (2)
- SLO exacte wetenschappen: fysica (3)
- SLO exacte wetenschappen: informatica (4)
- SLO exacte wetenschappen: wiskunde (5)
- SLO humane wetenschappen: economie (6)
- SLO humane wetenschappen: filosofie (7)
- SLO humane wetenschappen: gedrags- en cultuurwetenschappen (8)
- SLO humane wetenschappen: geschiedenis (9)
- SLO humane wetenschappen: rechten (10)
- SLO humane wetenschappen: talen (11)

Display This Question:

If At which university do you study? = University of Antwerp

Or At which university do you study? = Tilburg University

A06a1 Which academic year are you in?
* if you are enrolled in several years, please indicate the year in which you take the majority of courses

- ○ Bachelor 1 (1)
- ○ Bachelor 2 (2)
- ○ Bachelor 3 (3)
- ○ Bachelor 4 (4)
- ○ Bachelor 5 (5)
- ○ Bachelor 6 (6)

Display This Question:

If At which university do you study? = University of Antwerp

And Which type of course programme are you pursuing? If two options apply, please select the prevail... = Master*

A06a2 Which academic year are you in?
* if you are enrolled in several years, please indicate the year in which you take the majority of courses

- ○ Master 1 (1)
- ○ Master 2 (2)
- ○ Master 3 (3)

Display This Question:

If At which university do you study? != University of Antwerp

And Which type of course programme are you pursuing? = Bachelor's

A6b1 Which academic year are you in?
* if you are enrolled in several years, please indicate the year in which you take the majority of courses

- ○ Bachelor 1 (1)
- ○ Bachelor 2 (2)
- ○ Bachelor 3 (3)

At which university do you study? = Tilburg University
And Which type of course programme are you pursuing? = Bachelor's

- ○ Bachelor 4 (4)

Display This Question:
If At which university do you study? != University of Antwerp
And Which type of course programme are you pursuing? = Master's

Q121 Which academic year are you in?
* if you are enrolled in several years, please indicate the year in which you take the majority of courses

- ○ Master 1 (1)
- ○ Master 2 (2)
- ○ Master 3 (3)

A07 Are you:

- ○ Female (1)
- ○ Male (2)
- ○ Other (3)

A16b Did you come to the Netherlands for higher education?

- ○ Yes, I came to pursue a full university degree in the Netherlands (1)
- ○ Yes, I am here as an exchange student (2)
- ○ No (3)

A17 In which language(s) were you raised at home?

- ○ Language 1 (1) _____
- ○ Language 2 (2) _____
- ○ Language 3 (3) _____

Display This Question:
If At which university do you study? = University of Antwerp

A18a Did your father have the Belgian nationality when he was born?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)
- ○ Not applicable (4)

Display This Question:
If At which university do you study? = Tilburg University
Or At which university do you study? = Vrije Universiteit Amsterdam

A18b Did your father have Dutch nationality when he was born?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)
- ○ Not applicable (4)

Display This Question:
If Did your father have the Belgian nationality when he was born? = No
Or Did your father have Dutch nationality when he was born? = No

A19
In which country was your father born?

▼ Afghanistan (1) ... Zimbabwe (1357)

Display This Question:
If At which university do you study? = University of Antwerp

A20a Did your mother have the Belgian nationality when she was born?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)
- ○ Not applicable (4)

Display This Question:
If At which university do you study? = Tilburg University
Or At which university do you study? = Vrije Universiteit Amsterdam

A20b Did your mother have the Dutch nationality when she was born?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)
- ○ Not applicable (4)

Display This Question:

If Did your mother have the Belgian nationality when she was born? = No

Or Did your mother have the Dutch nationality when she was born? = No

A21
In which country was your mother born?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q109 What language(s) do you master?

	How would you rate your proficiency in this language?	How often do you use this language?
Language 1 (1)	▼ Mother tongue (1 ... Basic (4)	▼ Daily (1 ... Almost never (5)
Language 2 (2)	▼ Mother tongue (1 ... Basic (4)	▼ Daily (1 ... Almost never (5)
Language 3 (3)	▼ Mother tongue (1 ... Basic (4)	▼ Daily (1 ... Almost never (5)
Language 4 (4)	▼ Mother tongue (1 ... Basic (4)	▼ Daily (1 ... Almost never (5)
Language 5 (5)	▼ Mother tongue (1 ... Basic (4)	▼ Daily (1 ... Almost never (5)

A23 What is the highest level of education your mother has completed?

- ○ Less than primary school (1)
- ○ Primary school (2)
- ○ Secondary school or equivalent (3)
- ○ Bachelor's degree or equivalent (4)
- ○ Master's degree or equivalent (5)
- ○ Doctorate (e.g. PhD) (6)
- ○ I don't know (7)
- ○ Not applicable (8)

A24 What is the highest level of education your father has completed?

- ○ Less than primary school (1)
- ○ Primary school (2)
- ○ Secondary school or equivalent (3)
- ○ Bachelor's degree or equivalent (4)
- ○ Master's degree or equivalent (5)
- ○ Doctorate (e.g. PhD) (6)
- ○ I don't know (7)
- ○ Not applicable (8)

A27 Do you see yourself belonging to...?

- ○ The working class of society (1)
- ○ The lower middle class of society (2)
- ○ The middle class of society (3)
- ○ The upper middle class of society (4)
- ○ The higher class of society (5)
- ○ I don't know (6)

A28 In our society there are groups which tend to be towards the top and those that are towards the bottom. Here we have a scale that runs from top (1) to bottom (10). Where would you put yourself on this scale?

- ○ 1 (top) (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (bottom) (10)

A29 Did your parents live in a foreign country?

- ○ Neither of them (31)
- ○ Yes, my mother (32)
- ○ Yes, my father (33)
- ○ Yes, both (34)
- ○ I don't know (35)
- ○ Not applicable (36)

A30 Did you live in a foreign country before entering higher education?
* If you are an international student, foreign country refers to a country different from the country where you were born

- ○ Yes (1)
- ○ No (2)

Display This Question:
If At which university do you study? = University of Antwerp

A36 Did you obtain your secondary education degree in Belgium?

- ○ Yes (1)
- ○ No (2)

Display This Question:
If Did you live in a foreign country before entering higher education? If you are an international... = Yes*

A31 Please indicate the foreign country/ies where you lived with your family as well as the duration

	Time	
	Years (1)	Months (2)
Country 1 (1)		
Country 2 (2)		
Country 3 (3)		
Country 4 (4)		
Country 5 (5)		

A32 Do you have siblings?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Do you have siblings? = Yes

A33 How many of your siblings are studying/studied a higher education degree?

_____

Display This Question:

If If How many of your siblings are studying/studied a higher education degree? Text Response Is Greater Than or Equal to 1

A34 How many of your sibling(s) spent some time abroad during their higher education degree?
* This includes both a full degree abroad as well as a semester abroad, such as Erasmus+

	Siblings
	Number (1)
Did not participate (1)	
Did not participate but plans to do so (2)	
Did participate (3)	

A35 Can you (roughly) indicate below how many times you have travelled abroad for leisure?

	Travels
	Number (1)
With family (1)	
With friends (2)	
Alone (3)	
With a group (4)	

A36 Do you have children?

- ○ Yes (23)
- ○ No (24)

End of Block: A. Background

Start of Block: B. International dimension in higher education

B02 Did you take a free year (gap year) between secondary school and university?

- ○ Yes (1)
- ○ No (2)

Display This Question:
If Did you take a free year (gap year) between secondary school and university? = Yes

Q115
What did you mainly do during that gap year?
* Multiple options possible

- ☐ Travel (1)
- ☐ Paid work (2)
- ☐ Volunteering (3)
- ☐ Other (4) _____

Display This Question:
If Did you take a free year (gap year) between secondary school and university? = Yes

B03 Did you spend some time abroad during that gap year?

- ○ Yes (1)
- ○ No (2)

Display This Question:
If Did you spend some time abroad during that gap year? = Yes

C01 Do you intend to spend some time abroad (again) for studying / an internship during the remainder of your degree?

- ○ Definitely yes, I already signed up (260)
- ○ Definitely (261)
- ○ Might or might not (262)
- ○ Probably not (263)
- ○ Definitely not (264)
- ○ I don't know (266)

C02 Do you know that you can obtain a grant to go abroad during your study programme?

- ○ No (1)
- ○ Yes, but I am not eligible for a grant (2)
- ○ Yes, but I have no idea about the amount of the grant (3)
- ○ Yes, and I know the amount of the grant (4)

Display This Question:

If At which university do you study? = University of Antwerp

Display This Question:

If Do you intend to spend some time abroad (again) for studying / an internship during the remainder... = Definitely yes, I already signed up

Or Do you intend to spend some time abroad (again) for studying / an internship during the remainder... = Definitely

Or Do you intend to spend some time abroad (again) for studying / an internship during the remainder... = Might or might not

Or Do you intend to spend some time abroad (again) for studying / an internship during the remainder... = Probably not

Or Do you intend to spend some time abroad (again) for studying / an internship during the remainder... = I don't know

Q92

What are the main reason(s) why you would like to spend a period abroad during your studies?

	Very unimportant (1)	Unimportant (2)	Not unimportant, not important (3)	Important (4)	Very important (5)	Not applicable (1)

To develop my language skills (1)	○	○	○	○	○	○
For personal growth (2)	○	○	○	○	○	○
Because I want to immerse myself in another culture (3)	○	○	○	○	○	○
To enhance my career prospects (4)	○	○	○	○	○	○
To develop my intercultural skills (5)	○	○	○	○	○	○
To become independent (6)	○	○	○	○	○	○
To meet people from other countries (7)	○	○	○	○	○	○
Because I have/had a girlfriend/boyfriend abroad (8)	○	○	○	○	○	○
To learn more about my subject from another viewpoint (9)	○	○	○	○	○	○
Because it is obligatory in my study programme (10)	○	○	○	○	○	○
For the adventure (11)	○	○	○	○	○	○
Because the university education level abroad is higher (12)	○	○	○	○	○	○
To party (13)	○	○	○	○	○	○

C08b Which country/ies would you like to go to and for how long? (please indicate a maximum of 5 countries)

	Preferred country (from highest preference to lower preference) (1)	Preferred duration (2)
Preferred country 1 (1)		
Preferred country 2 (2)		
Preferred country 3 (3)		
Preferred country 4 (4)		
Preferred country 5 (5)		

D04b Think about your close friends living in the Netherlands. On average, how often do you have contact with them?

	Rarely or never (1)	Once a year (2)	Several times a year (3)	Once a month (4)	Several times a month (5)	Once a week (6)	Several times a week (7)	Daily (8)	I don't know (9)
Travel to meet one or several of them (1)	○	○	○	○	○	○	○	○	○
Receive visits from one or several of them (2)	○	○	○	○	○	○	○	○	○
Phone conversations (3)	○	○	○	○	○	○	○	○	○
SMS/Whatsapp (4)	○	○	○	○	○	○	○	○	○
Skype (5)	○	○	○	○	○	○	○	○	○
Social Media (e.g. Facebook, Twitter) (6)	○	○	○	○	○	○	○	○	○

Display This Question:

If At which university do you study? = University of Antwerp

D4a Do you have close friends living in EU countries other than Belgium?
* Other EU countries (except Belgium) are Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

○ Yes (1)

○ No (2)

Display This Question:

If At which university do you study? = Tilburg University

Or At which university do you study? = Vrije Universiteit Amsterdam

D4b

Do you have close friends living in EU countries other than the Netherlands?

* Other EU countries (except the Netherlands) are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

- ○ Yes (1)
- ○ No (2)

Display This Question:

*If Do you have close friends living in EU countries other than Belgium? * Other EU countries (except... = Yes*

*Or Do you have close friends living in EU countries other than the Netherlands? * Other EU countries... = Yes*

9.3 The relationship between language factors and study abroad aspirations, full table (N = 2,327)

Table 4. The relationship between language factors and study abroad aspirations

	Dependent variable					
	Maybe	*Yes*	*Maybe*	*Yes*	*Maybe*	*Yes*
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
Intercept	-0.325	-0.239	-0.256	-0.133	-0.414	-0.538*
	(0.245)	(0.228)	(0.259)	(0.236)	(0.283)	(0.264)
Proficiency level (ref=advanced)						
Intermediate	-0.185	-0.470**				
	(0.163)	(0.159)				
Basic	-0.104	-0.388				
	(0.353)	(0.401)				
Language use (ref=daily)						
Weekly			-0.167	-0.274*		
			(0.142)	(0.130)		
Monthly			-0.132	-0.607*		
			(0.252)	(0.258)		
Several times a year			0.032	-0.216		
			(0.359)	(0.368)		
Almost never			-1.887	0.254		
			(1.073)	(0.531)		
Only one language indicated			0.212	0.590		
			(0.350)	(0.350)		
Number of languages (ref= one foreign language)						
Only mother tongue(s)					-0.768	0.108
					(0.518)	(0.432)
Two foreign languages					-0.019	0.258
					(0.167)	(0.164)
Three foreign languages					0.178	0.317
					(0.173)	(0.177)
Four or more foreign languages					0.090	0.087
					(0.219)	(0.220)

	Dependent variable					
	Maybe (1)	*Yes (2)*	*Maybe (1)*	*Yes (2)*	*Maybe (1)*	*Yes (2)*
Subjective Social Status (ref=upper middle class)						
The higher class of society	-0.120	0.008	-0.117	0.034	-0.121	0.016
	(0.283)	(0.261)	(0.285)	(0.262)	(0.283)	(0.261)
The low middle class of society	-0.002	0.017	0.004	0.041	-0.003	0.042
	(0.147)	(0.137)	(0.146)	(0.137)	(0.147)	(0.137)
The working class of society	0.209	0.443	0.242	0.480	0.226	0.460
	(0.543)	(0.502)	(0.545)	(0.507)	(0.545)	(0.508)
Parent(s) lived abroad (ref=at least one of the parents lived abroad)						
Neither of the parents lived abroad	-0.091	0.196	-0.087	0.183	-0.104	0.173
	(0.140)	(0.134)	(0.140)	(0.135)	(0.140)	(0.134)
Unknown	0.592	0.430	0.640	0.466	0.552	0.423
	(0.412)	(0.431)	(0.415)	(0.432)	(0.411)	(0.431)
Student's experience of living abroad (ref=no experience)						
Experience of living abroad	-0.226	0.045	-0.237	0.024	-0.250	0.014
	(0.179)	(0.167)	(0.179)	(0.167)	(0.179)	(0.167)
Gap year abroad (ref=no year abroad)						
Gap year abroad	0.429*	0.329	0.429*	0.328	0.438*	0.349
	(0.218)	(0.216)	(0.218)	(0.216)	(0.218)	(0.216)
Trips abroad (ref=37 times or more)						
Less than 12 trips abroad	0.316	-0.222	0.281	-0.301	0.342	-0.226
	(0.175)	(0.168)	(0.176)	(0.169)	(0.177)	(0.168)
Between 13 and 24 trips	-0.197	-0.411**	-0.218	-0.455**	-0.190	-0.438**
	(0.170)	(0.156)	(0.170)	(0.157)	(0.170)	(0.157)
Between 25 and 36 trips	0.189	-0.005	0.190	-0.015	0.195	0.002
	(0.167)	(0.154)	(0.168)	(0.155)	(0.167)	(0.154)
Education of the parents (ref=high)						
Low	-0.044	-0.409	-0.056	-0.430	-0.067	-0.412
	(0.362)	(0.380)	(0.361)	(0.380)	(0.362)	(0.379)
Middle	-0.321*	-0.228	-0.301*	-0.207	-0.327*	-0.236
	(0.144)	(0.134)	(0.144)	(0.134)	(0.143)	(0.135)

	Dependent variable					
	Maybe	*Yes*	*Maybe*	*Yes*	*Maybe*	*Yes*
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
Unknown	-0.308	-0.297*	-0.333	-0.962*	-0.316	-0.916*
	(0.379)	(0.418)	(0.380)	(0.419)	(0.381)	(0.418)
Original nationality of the parents (ref=both of the parents had hidden for peer review nationality)						
Neither of them had hidden for peer review nationality	0.704***	0.736***	0.672***	0.663***	0.739***	0.780***
	(0.162)	(0.163)	(0.165)	(0.166)	(0.164)	(0.167)
Only one of the parents had hidden for peer review nationality at birth	0.296	0.570*	0.279	0.556*	0.297	0.559*
	(0.242)	(0.228)	(0.242)	(0.227)	(0.243)	(0.227)
Siblings' international experience (ref=no siblings studied abroad)						
At least one sibling studied abroad	0.293*	0.328*	0.302*	0.358*	0.290*	0.337*
	(0.147)	(0.141)	(0.148)	(0.142)	(0.147)	(0.141)
Friends abroad (ref=no friends abroad)						
Friends abroad	0.473***	0.633***	0.466***	0.614***	0.481***	0.663***
	(0.135)	(0.139)	(0.136)	(0.137)	(0.136)	(0.140)
Gender (ref= female)						
Male	0.060	-0.050	0.053	-0.069	0.075	-0.035
	(0.120)	(0.115)	(0.120)	(0.116)	(0.120)	(0.115)
Study field (ref=Social Sciences)						
Engineering and Technology	0.158	0.335	0.175	0.346	0.203	0.334
	(0.436)	(0.388)	(0.435)	(0.390)	(0.437)	(0.390)
Humanities	-0.084	0.024	-0.090	0.005	-0.080	0.024
	(0.168)	(0.155)	(0.169)	(0.156)	(0.169)	(0.155)
Medical and Health Sciences	0.185	0.637***	0.170	0.615***	0.176	0.592***
	(0.168)	(0.173)	(0.199)	(0.173)	(0.201)	(0.175)
Natural Sciences	0.267	0.169	0.244	0.129	0.269	0.164
	(0.217)	(0.228)	(0.218)	(0.228)	(0.220)	(0.228)
University (ref=University A)						
University B	0.590***	1.023***	0.585***	1.051***	0.548***	0.983***
	(0.156)	(0.148)	(0.155)	(0.149)	(0.159)	(0.152)
University C	0.112	0.219	0.088	0.198	0.109	0.212
	(0.168)	(0.162)	(0.169)	(0.162)	(0.168)	(0.162)
University year (ref=Bachelor)						

	Dependent variable					
	Maybe	*Yes*	*Maybe*	*Yes*	*Maybe*	*Yes*
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
Master	-1.573***	-1.831***	-1.573***	-1.860***	-1.554***	-1.793***
	(0.124)	(0.120)	(0.124)	(0.121)	(0.124)	(0.119)
Pseudo R^2	0.11					

**p <0.05, **p < 0.01, ***p < 0.001*

9.4 The robustness check. 'Only mother tongue' as a reference group

Table 5. The robustness check. 'Only mother tongue' as a reference group

	Dependent variable	
	Maybe	*Yes*
	(1)	*(2)*
Number of languages (ref= Only mother tongue(s))		
One foreign language	0.768	-0.108
	(0.518)	(0.432)
Two foreign languages	0.749	0.149
	(0.514)	(0.426)
Three foreign languages	0.946	0.209
	(0.515)	(0.427)
Four or more foreign languages	0.858	-0.021
	(0.530)	(0.445)
Pseudo R^2		

**p <0.05, **p < 0.01, ***p < 0.001*

9.5 Language Proximity as a Factor in International Student Mobility

CHEI Book (in press)

Language proximity as a factor in international student mobility

Abstract

Many papers on international student mobility have considered different factors influencing the destination choices of international students. However, only a limited number of studies have analysed the role of language proximity on international educational choices. This chapter examines its role in international degree-seeking student flows, arguing that language proximity simplifies academic, cultural and socio-economic integration of international students in the destination country and, as a result, makes adaptation to the new environment easier and smoother.

Keywords: language proximity, international student destination choice, international student mobility, international student decision-making process, Indo-European languages.

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- The authors declare that there is no conflict of interest
- The authors received no financial support for the research, authorship and/or publication of this article.
- Ethical approval for research with human subjects was not required.

Introduction

Although the concept as well as the approaches towards Higher Education Internationalisation are undergoing some changes due to the influence of economic, political, social and cultural factors (de Wit, 2019), international student mobility remains one of its most important parts. In the Communication from the European Commission on achieving the European Education Area by 2025, learning mobility is listed as one of the ways to attain quality in education. Interestingly, learning foreign languages and enhancing foreign language skills is listed next (European Commission, 2020). As the authors note, 'being able to speak different languages is a condition for studying and working abroad, and fully discover Europe's cultural diversity' (p.6).

Indeed, language is an indispensable part of education abroad and it plays a role at different stages of the process. This is true both for short-term credit mobility programmes and for longer diploma, or degree mobility, study abroad. Students participating in mobility use their language skills to take courses (either in the official language of the country of destination, or English/another popular language as a *lingua franca*), and their language skills may determine their choice of destination country and study abroad aspirations in general. Furthermore, international students use their language competences for communicating in the destination country. Participation in education abroad, both for credit or full diploma programmes, can also contribute to enhancing a student's foreign language skills and thus to increasing their linguistic capital (Gerhards, 2014).

The discussion of language proximity in this chapter is centred on diploma mobility students, i.e. those who go to a destination country to pursue a degree or other form of award at a higher education institution in the country, usually for a period of a year or longer. These students generally stay longer in the destination country than short-term, credit mobility students and are consequently more exposed to the culture and language of the country in addition to the language of instruction. The analysis takes a macro level approach and considers the official language(s) spoken in the home and destination countries. This means that meso level factors to do with, for example, the decision of an institution to deliver programmes in English or another lingua franca are excluded. Micro level factors, such as any second languages spoken by individual students, are explored separately in a forthcoming paper (Ovchinnikova, van Mol & Jones, under review).

Language as a factor in Education Abroad

Despite the perhaps obvious role of language in the decision-making process for study abroad, until recently it has not been a key focus of research studies on factors affecting international student mobility.

According to Human Capital Theory (Becker, 1975), the decision to move for study purposes to a particular country is made based on the analysis of costs and benefits. Studying in a linguistically close country can be one way to increase the student's human, social and cultural capital and at the same time lower the costs of migration. The ability to communicate in a destination country is vital for successful integration of international students for study related reasons, possible job opportunities in the future and overall well-being in the destination culture. Linguistic proximity can facilitate the process of

acquiring a foreign language and thus assist adaptation, enhancing the arrival experience and the ease of settling into the new country.

Existing research indicates that the factors influencing international student mobility, including language, can be situated at the macro, meso and micro level (for a more detailed and recent overview of determinants of international student mobility see, for example, Choudaha and Van Mol, 2022). A micro level analysis of mobility drivers focuses on the individual factors and motivations of international students. At this level, individual foreign language competences can be both a source of attraction for specific mobility destinations as well as a deterrent from study abroad opportunities when students are less proficient in the destination language. A desire to improve their knowledge of a foreign language is one of the aspects international students consider when they decide to participate in study abroad programs (see e.g. Bourke, 2000; Cubillo et al., 2006; Rodriquez Gonzalez et al., 2011; Lesjak et al., 2015; Bell, 2016). At the same time, lack of confidence or competence in a foreign language may deter students from engaging in such international programs (see e.g. Findlay et al., 2006; Van Mol & Timmerman, 2014; Beerkens et al., 2016).

At the meso level, the chosen language of instruction in higher education institutions may influence the decision of an international student to study abroad. The role of English as a medium of instruction is undeniable in driving international student mobility and in attracting students to a given university (Waters & Brooks, 2021). Some students aspiring to study abroad see studying in a language other than English as one of the most serious barriers to mobility (Doyle et al., 2010; Bamberger, 2020). However, paraphrasing Caruso and de Wit (2014), higher education institutions as well as the language of instruction in these institutions 'do not operate in a vacuum' (p.18) and consequently cannot be considered independently of the country and its official language. While some students mention studying in a language other than English to be a problem, others report that they want to avoid speaking English outside the university as it prevents them from becoming more fluent in another foreign language – the official language of the country (Bell, 2016). Indeed the OECD reports that an average of 25% of international students change their student status in the host country, mainly for work-related reasons (OECD, 2021). This means that the importance of learning the official or most common language of the destination country is likely to be higher for some students, and linguistic proximity may facilitate its acquisition (Chiswick & Miller, 2004).

Finally, the macro level analysis – which is the focus of this chapter - concentrates on country-related factors in international mobility including the official or most widely spoken language of a country. The studies that analyse the role of language as a macro factor find, in the main, that international student flows are generally directed to countries either with the same language as their own, to English-speaking countries, or to countries where other popular languages are spoken (Maringe & Carter, 2007; Kahanec & Kralikova, 2011; Van Bouwel & Veugelers, 2013; Beine et al., 2014; Abbott & Silles, 2016). However, as also evidenced in a number of research studies (Brown et al., 2016; Goodman, 2007; Kingeski & Nadal, 2020), the influence of language on international students' destination choice is a more complex phenomenon which is not always limited to the role of shared and popular languages. In particular, as discussed in this chapter, linguistic proximity (in other words the degree of similarity and difference between languages, defined in more detail later on in the text) also plays a role in student

destination choices.

Language as a macro factor in international student mobility

Traditionally, researchers who have considered language factors at the macro level have generally studied it in terms of 'speaking the language of the destination country' (Lee & Tan, 1984; Beine et al., 2014; Abbott & Silles, 2016; Perkins & Neymayer, 2014). These papers showed that the existence of a common language between two countries positively influences international student flows. Studying a new language can be costly, and so moving to a country where the same language is spoken removes the need for such study, thus lowering the cost of study migration. It can also facilitate adaptation.

Abbott and Silles (2016) indicate that the effect of a common language might be especially important for students from low-income countries. Their results are in line with Wei et al. (2019) who also find that students from developed countries tend to be less deterred from mobility aspirations based on whether the same language is spoken between home and destination countries. Hou and Du's (2020) study, devoted to the emergence of new regional hubs and drivers of international student mobility, also demonstrates a significant influence of the same language on the choice of a destination country in addition to economic, political, and historical ties. As the authors note, 'similar cultural backgrounds and language can shorten the psychological distance between people and reduce the sense of strangeness. Therefore, students from some Asian, African, and Latin American countries prefer European countries with historical colonial connections and similar languages to their home countries as their study destinations' (Hou & Du, 2020 p. 20).

An alternative approach to studying the role of language at the macro level is to analyse the influence of the most popular languages as attraction factors for certain destination countries. The studies using this approach observe that student flows to countries where major languages are spoken (English, Spanish, Italian, French, German) are usually higher than to other countries (Rodriguez Gonzalez et al, 2011; Kahanec & Kralikova, 2011). Consequently, according to the OECD (2021), the most popular countries for international students in 2019 were the USA, the UK, Australia, Canada, Germany, and France.

All the studies mentioned above treated the language factor as a binary variable, meaning either a shared language between home and destination countries or destination countries where major languages are spoken. However, we wanted to know whether language can be a factor in decision making if the language of the destination may be acquired more quickly as a result of linguistic proximity. An analysis of nursing students' mobility intentions by Goodman et al. (2007), on the one hand, aligns with the binary approach, in that the study revealed a strong preference for English speaking countries among UK students. However, the other group of students in the same study, from Spanish universities, indicated Italy as the most preferable destination followed by the UK and USA. Interestingly, one of the explanations put forward by the authors in this case was that Spanish students were not deterred from choosing a country where they do not speak the language since 'Italian is one of the easiest languages for Spanish speakers to learn' (p. 381). This suggests that the role of language may not simply be limited to a binary measure i.e. whether students speak the destination language or not. It suggests instead that linguistic proximity might also play a role in international

students' choice of study abroad destinations.

Similarly, another analysis by Kingeski and Nadal (2020), of the drivers of international student mobility from Brazil to Spain, finds that proximity between the languages and cultures is one of the most important factors in choosing Spain as a destination country. As the authors explain, 'the Spanish language represents a more accessible option for studying than a country where English prevails' (Kingeski and Nadal, 2020 p. 102); two-thirds of the respondents planned to study in Spain, and only one-third indicated the UK and the USA as the most desired destinations.

Returning to Human Capital Theory (Becker, 1975), it suggests that moving to a linguistically proximate country, or to a country with the same language, can lower monetary and non-monetary costs by reducing the number of hours, or minimizing the efforts, needed to learn the language. This can also facilitate social integration and reduce psychological barriers. Chiswick and Miller's (2004) analysis of language proficiency among immigrants in the US and Canada empirically showed that, when there is greater distance between a native language and the official language of the destination country, the result is a lower level of language proficiency compared to speakers coming from countries which are linguistically closer.

The evidence in this section suggests that there is more to be considered than simply analysing the influence of a shared language or flows to countries in which the most commonly used and studied languages are spoken. Although this binary approach can shed some light on the role of language as a macro factor driving international student mobility, it does not reflect all possible influences of language on the process, and deeper analysis is required, with linguistic proximity apparently playing a role.

The nature and role of language proximity in international student decision-making

Language proximity, or linguistic distance, seeks to understand the degree of similarity and difference between languages. The idea of what language is, as well as the views about how language develops and how languages differ from each other, has been changing throughout the centuries. The first attempt to find links between languages and classify them was undertaken in the 16th century by the French-Dutch linguist Joseph Justus Scaliger. This was significantly developed in the 18th century by the philologist, William Jones, who postulated that there existed a relationship between European and Indo-Aryan languages, which later became known as Indo-European languages. However, it was not until the 19th century that comparative historical linguistics became the focus of linguistic thought.

Languages are complex phenomena that differ in syntax, morphology, phonology, grammar, vocabulary, and so on. Analysing similarities and differences of these aspects of languages can lead to a better understanding of the history of a language and can be used to measure the degree of relatedness between them.

One of the first classifications that included the analysis of grammar, lexical, phonetic and syntactic similarities is a genealogical classification which shows the relationship between languages from a historical perspective. In this classification, language families are divided into branches, groups and subgroups of related languages. Each stage of fragmentation unites closer languages in comparison with the previous, more general

one. The index takes the value from 0 to 1 depending on the number of levels (branches, groups, subgroups of the language family) the languages share.

Another approach to measuring distances between languages is based on the phonetic structure of the compared languages. Levenshtein (1966) suggested an algorithm that calculates the number of phonetic alterations required to change the word from one language to another and thus determine the distance between languages.

Lastly, when comparing languages, historical analysis of the similarities and differences in the vocabulary of two languages plays a very important role. The lexico-statistical approach is based on analysing words that historically belonged to the language, such as numerals (up to ten), words denoting parts of the body, names of some animals, plants, tools, and so on. This therefore excludes possible borrowings as a result of migration and contacts with other languages. This classification was developed by linguists (Dyen et al., 1992) at the end of the 20th century. In contrast to the genealogical classification for which distances have to be decided in case of each particular analysis, the distances based on a lexico-statistical analysis have also been imputed by Dyen et al, though only for Indo-European languages. As the current study focuses on countries in which Indo-European languages are spoken, such a classification fits well.

Despite significant attention to the question of language proximity in the literature on migration flows (see e.g. Adsera & Pytlikova, 2015; Belot & Ederveen, 2014; Pedersen et al., 2008), where the positive influence of this factor has been empirically evidenced, the role of language proximity in international student decision making has not been analysed to any great extent as yet. This is even more surprising since international students are increasingly considered highly-skilled migrants (Kahanec & Kralikova, 2011), for whom language plays an important role at different levels of the study abroad process.

Our recently published paper on the role of language proximity in the flows of degree-seeking students (Ovchinnikova, Van Mol & Jones, 2022) brings the focus on linguistic proximity to the forefront. In order to study its role in shaping international student mobility flows, we use the distances between languages, based on the lexico-statistical classification (Dyen et al., 1992). We analysed degree-seeking student flows between 21 countries of the European Economic Area, but excluded English-speaking destinations, given the overriding attraction of the English language for internationally mobile students.

In order to understand the role of language proximity on international flows among 21 countries of the EEA, we applied a gravity model. In our specification of a gravity model we used language distance instead of geographical distance. In economics, which in turn adopted Newton's law of gravity, gravity models are used to explain international trade flows. The trade between any two countries is assumed to depend positively on the GDP of both countries and to be inversely related to the geographical distance between these countries. This methodology has also been successfully adapted to analyse migration and international student flows, typically by replacing the GDP of countries by their total student population and considering the distance between country capitals (Thissen & Ederveen, 2006; Abbott & Silles, 2016).

We estimated our model at three different time periods (2005, 2010 and 2015), and we also ran a pooled regression. All three time periods (2005, 2010, 2015), as well as the

pooled model, revealed a statistically significant influence of language proximity on the flow of international students from one country to another in the 21 European Economic Area countries examined.

The results hold true after controlling for confounding factors such as geographical distance, difference in tuition fees, reputation of educational systems and GDP per capita between home and destination countries as well as the effect of cross-border networks. The latter, measured as the total stock of migrants from the country of origin in the destination country, is important from different perspectives. First, it acts as an incentive for the students (an important network can reduce adaptation costs in the destination country). Second, it can also partly capture the influence of cultural proximity on migration, thus helping to reduce the confusion between linguistic and cultural proximity in the estimates.

We believe that this is the first time a statistically significant positive influence of language proximity on international student flows has been explicitly identified. Interestingly, the influence of geographical distance - used as a confounding factor - is not always significant, which suggests that at least in the analysed region of our study, limited to EEA countries, the distance between capital cities does not play as important a role as is usually shown in the literature (Van Bouwel & Veugelers, 2013; Thissen & Ederveen, 2006; Abbott & Silles, 2016).

Conclusion and future research

Language plays an important role at different stages in the study abroad process. It influences a student's decision over whether to embark on a study abroad program and which particular country to choose. It is used to communicate in the destination country both during studying and, more broadly, for living in and experiencing the country (see, for example, Castillo Arredondo et al. (2018) for a discussion of educational tourism).

However, a typical research approach used to analyse the role of language at the macro level does not allow us to capture the indirect influence of the language determinant. Instead, these studies largely focus on either the same official language between home and destination countries, or the influence of the most popular languages on attracting foreign students. Language proximity in our research is seen to have broader dimensions. It can influence the decision to participate in study abroad programs in the first place, but it can also be seen as an influence in terms of the time required to learn a non-proximate foreign language, with a consequent reduction in capital investment on the basis of costs and benefits.

Language proximity can also strongly correlate with cultural proximity and reflect historical and cultural contacts between countries. The latter (isolating the language factor from cultural ties) can also be proposed as one of the questions for future analysis. However, cultural proximity is more difficult to measure and quantify. One of the ways to delineate the influence of language proximity used in our analysis is to control for the cross-border network effect which may also capture the effect of cultural proximity.

Another prospect for future research could be trying to establish a causal relationship between the language proximity variable and the choice of destination country. In our

analysis we focused only on 21 countries of the EEA, in all of which Indo-European languages are spoken. Studying the role of language proximity could be expanded to more countries and other language families for which other language classifications discussed above could be used.

This focus on a particular area and a specific language classification can be considered a limitation. As seen in our brief literature review, the role of language may vary depending on the geographical area, approaches to the language variable, data and type of mobility. For some flows, most common languages play an important role, for others shared languages or language proximity matter more. Moreover, as the patterns of international student mobility undergo some changes, the role of language among other factors may change, too.

Finally, most papers on factors influencing international student mobility focus on official or most common languages of a country rather than language proficiency of students in specific foreign languages. Further analysis of such micro as well as meso perspectives could add to the present macro level study and provide a more comprehensive picture of the role of language - at the individual and institutional levels - in international student decision-making processes.

Our analysis has contributed to the field by demonstrating the importance of linguistic proximity for international student mobility among 21 countries of the European Economic Area. We found that student flows to linguistically proximate countries are higher than flows between those which are more distant. We have argued that, in line with Human Capital Theory, language proximity simplifies academic, cultural, and socio-economic integration in the destination country making adaptation to the new environment easier and smoother.

While several studies have shown that the most common world languages influence the direction of international mobility flows, the vital contribution of our research is that language proximity also plays a significant role in destination choices. This has been demonstrated to be one important factor to be taken into account for future research and analysis around the complex decision-making processes driving international student mobility.

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