Brain Training – Brain Draining

Skilled Migration, Student Mobility, and Transnational Higher Education

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I used to never like acknowledgements sections.

I always thought they were a sort of way to implicitly say that the completed work done is special. No bus driver would give an acknowledgment speech after having brought all the passengers to their destination nor would any bricklayer after having finished building a house. Because of this, I thought that the acknowledgements section was a way for intellectuals to state the "superiority" of their work above that of others.

I thought acknowledgments were a way to boastingly tell the world that you are what are expected of successful people. Also, I could not understand why, in an individual work such as a thesis, authors started to name and acknowledge dozens of people: was it a way to say that if all these – sometimes quite known – people helped them, the work necessarily had to be good?

And then I could not really capture the rationale behind the most intimate parts with the mentioning of the parents, the "love of my life", and so on… I could not understand how these personal feelings could enter – and not jar – the pages of an academic, scientific work.

All these are thoughts I had before starting my PhD and writing a doctoral thesis. Perhaps one of the main goals of a doctoral programme precisely is to teach people about what academic work is. After having attended such a programme, I can state that what I thought about acknowledgements sections was the result of what I erroneously thought about academic work.

Before doing a PhD, I thought academic work was an individual undertaking and that to a certain extent it is solitary work, but it is much more than that. It is an individual effort that absorbs one so much that, in some moments, only the lucid comments and suggestions of others can make it come forth, develop, and advance. I thus learned that others are fundamental in academic work.

My doctoral path could not have started without the trust and continuous support given to me by my supervisor, Pau Baizán Muñoz. I have to especially thank him for his professionalism and integrity, which allowed me to get a pre-doctoral scholarship and to do my doctorate in the, previously unfamiliar for me, context of Pompeu Fabra. Gosta Esping-Andersen's inspiring course broadened my way of thinking and constituted the starting point for a sometimes very hard journey. Along this journey, the inputs, reassurance, and lovely irony provided by Bruno Arpino were fundamental for me on many occasions. Our department also has the luck to host both professionally and personally generous researchers, like Luis Ortiz Gervasi and Maria José Gonzalez Lopez, who are always willing to provide a little of their time and expertise, to lend a hand and offer a smile. I am also indebted to the cooperativeness of many colleagues in the department, among whom I have to especially thank Daniela Bellani and Clara Cortina Trilla. In the last months, the support of the PhD coordinator, Jorge Rodríguez Menés, was very important, as well as that of all the administrative staff. Writing a PhD thesis takes many years and, occasionally, some periods

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Before doing a PhD, I thought academic work was something exclusively professional and that personal references and thoughts were amiss. However, writing one showed me that it is something which involves thinking about your entire life (this is maybe connected to the grateful awareness that your life is not only the PhD). This brings about a compelling need to say thanks to this life "outside" and the people who were there to remind me that it is the most important thing. Thanks are therefore due to my family, to Miguel, and to all my friends who are not related to academia. Equally important, however, are those friends I had the luck to meet in academia and with whom I could share all the worries and paranoid thoughts that characterize this "special" experience: Bruno Arpino, Roger Barres, Daniela Bellani, Queralt Capsada Munsech, Silvia Claveria Arias, Clara Cortina Trilla, Alessandro Di Nallo, Mohammed El Bachouti, Nuria Franco Guillén, Adam Holesch, Iñigo Fernandez Iturrate, Albert Jimenez, Lisa Kraus, Francesca Luppi, Sergio Martini, Natalia Malancu, Francesco Pasetti, Luis Pérez Lozano, Ixchel Pérez Duran, Léa Pessin, Roberta Rutigliano, Ana Safranoff Yankillevich, Juan Carlos Triviño Salazar, and Emrah Uyar. Many of them are not only good colleagues but also a true gift. An empathic and tender thanks also goes to all my PhD-friends, Rodri, Natalia, Maira, Lau, Adri, Stephan, Yennesit, Jhon, and Edu, some of them already doctors, in other disciplines and at various universities.

Before doing a PhD, I thought academic work would be about researching something "out there". Yet many times during the PhD, I slowly discovered many things inside myself. I learned how the attempt to investigate something new means to physically reach your limits, the limits of your ego, your fears… how working in the "ivory tower" of academia can bring people to rediscover their origins. This made me aware, for the first time, of my social class, my upbringing, and my gender. I thank the people, like Jordi Guiu Payá and Monica Clua Losada, with whom I could share these quite intimate discoveries. I would like also to thank them for reminding me of the kind of "academic worker" I would like to be. Regarding this, my deepest gratefulness goes to *el maestro* Joaquín Herrera Flores, who showed me that an alternative way of thinking about things and doing intellectual work is still possible and necessary – as he said, "if something is possible and necessary, then it becomes inescapable". This has on various occasions motivated me to keep doing.

This time as a PhD candidate was not just an internal journey of sorts. The pre-doctoral scholarship from the Spanish Ministry of Science and Innovation that I had the luck to hold also allowed me to travel to different countries. These experiences would not have been possible without the people who facilitated these plans, such as, Sorana Toma and Jan Sebastian Ebert, and the professors who accepted my requests to be a visit scholar and were available to me at the different research centres: Hans-Peter Blossfeld, Mathias Czaika,

Thomas Bräuninger, and Boris Nieswand. During each of these stays I had the good fortune to find unique companions to share the experience with, such as Alessandra Minello, Camilla Baraldi, Daniela Vono de Vilhena, and Jan Guijarro Usobiaga. It is important, at the end of this journey, to thank all those involved for all of this.

Before doing a PhD, I always sceptically wondered, "For whom do authors write their acknowledgments?!" For the unfocused reader who will read only the acknowledgements and no other parts of the academic work? For themselves? Or, really, for the people they want to actually thank?

I now think that acknowledgments are important for many reasons and that one writes them both for oneself and for others – this is why I ended up writing almost three pages. I now think acknowledgments may primarily serve the author as a therapy of sorts to satisfy the egotistic need to share with others some reflections that accompanied the several-years-long birth of the dissertation manuscript. Perhaps, in this sense, they constitute a cathartic exercise to finally close a chapter and, with a lighter heart, start a new one. Nevertheless, acknowledgments may also originate from the unconscious awareness and fear of the fact that, often, "gratitude has an expiration date[1]" (own translation). This is why I now find them a fundamental way to crystallise my sincere gratitude into some pages, so that the significant contribution of all the people I mentioned can never be erased.

I still think that the opportunity to write acknowledgments is a privilege, and I do not like privileges… However, as I do not know whether, in the future, I will have the chance to write them again in other works, I do not want to miss the opportunity to tell some people how important they are and to dedicate this manuscript to them.

A la familia Rodríguez Díaz por hacerme sentir parte de ella.

Ai miei genitori e alla mia meravigliosa famiglia per la fiducia riposta in me e nei miei sogni, per ricordarmi quello che è veramente importante, per essere il mio porto sicuro e per accompagnarmi, anche nella distanza, con il loro amore e il loro sostegno.

Y, a Miguel, el amor de mi vida, por haberse vuelto mi mejor compañero de viaje.

[1] PÀMIES, S. (2013), "Agraïments". In *Cançons d'amor i de pluja*, p. 154.

ABSTRACT

The cross-border mobility of educational programmes and institutions, commonly known as transnational higher education (TNHE), represents an important dimension of the internationalisation of higher education. Its relationship with the mobility of tertiary students and graduates has raised interest among stakeholders, policy-makers and scholars from different disciplines, but empirical evidence is rare. This thesis addresses this gap by providing three empirical studies on this issue, which is relevant, both for developing and developed countries. The first article investigates the link between TNHE enrolment and subsequent skilled migration into the country of the education provider. The second deals with the determinants of TNHE enrolment and international student mobility, also analysing the linkage between the two phenomena. The last article offers an in-depth examination of the attitudes of TNHE students towards studying abroad and explores the meaning TNHE enrolment acquires for them. Overall, the results indicate that TNHE is not substituting student mobility and suggest that the provision of TNHE can constitute a successful strategy for developed countries to increase skilled migrants' and students' recruitment. The results equally imply that more caution should be devoted to these kinds of issues by developing countries when opening their educational market to foreign providers. A range of other findings contribute to a deeper and nuanced understanding of the phenomenon of TNHE. The number of insights provided can benefit future research both on international migration and higher education.

RESUM

La mobilitat internacional dels programes i les institucions educatives, comunament coneguda com l'educació superior transnacional (TNHE), representa un aspecte important de la internacionalització de l'educació superior. La seva relació amb la mobilitat dels estudiants d'educació superior i graduats ha despertat interès entre responsables polítics i acadèmics de diferents disciplines. L'evidència empírica és però escassa. Aquesta tesi proporciona tres estudis empírics sobre aquesta qüestió, que és rellevant tant per als països en desenvolupament com per aquells desenvolupats. En el primer article s'investiga la relació entre estudiar en el marc de la TNHE i la migració qualificada posterior al país del proveïdor dels serveis educatius. El segon s'ocupa dels factors determinants de la inscripció en la TNHE i de la mobilitat internacional dels estudiants. També ofereix una anàlisi de la relació entre els dos fenòmens. L'últim article examina en profunditat les actituds dels estudiants inscrits en la TNHE respecte a la migració per estudiar a l'estranger i explora el significat que la inscripció en la TNHE té per a ells. A nivell general, els resultats indiquen que la TNHE no està substituint la mobilitat d'estudiants i suggereixen que la provisió de TNHE pot constituir una bona estratègia per els països desenvolupats per atreure més immigrants qualificats i estudiants. Els resultats impliquen igualment que els països en desenvolupament, que obren el seu mercat educatiu als proveïdors estrangers, han de prestar més atenció a aquest tipus de possibles conseqüències. Una gamma d'altres resultats contribueixen a una comprensió més profunda i matisada del fenomen de la TNHE. Si proporciona també una sèrie de pistes i reflexions per a futures investigacions.

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International education and skilled migration have become inextricably linked, creating new and distinct migration pathways.

[Shanthi Robertson, 2011: 103]

INTRODUCTION

In the last few decades, skilled migration, international student mobility and the internationalisation[2] of higher education have come to occupy a central role in the agenda of governments and policymakers and have received increased and renewed scholarly attention. The supposed benefits to socio-economic development from the recruitment of skilled individuals have led many industrialised countries, increasingly faced with demographic shortages, to implement policies to actively select, attract and retain them. From the other side, traditional sending countries of skilled migrants also try to find strategies to retain their skilled citizens, to promote their return if they are abroad and to attract foreign skilled individuals.

Higher education and skilled migration are by definition connected. This is self-evident in the adjective 'skilled', which refers to 'knowledge' acquired in the higher education system and corresponds, strictly speaking, to the possession of a tertiary education degree (OECD, 1992). Higher education generates a skilled workforce that may then emigrate. In some cases, higher education fails to provide enough skilled workers, making the recruitment of foreign graduates "a necessity" (Levatino and Pécoud, 2012: 1271). A lack of educational opportunities can lead people to seek higher education abroad, increasing their likelihood of staying there after graduation. Studying

[2] There is an on-going intensive debate about the use and the different connotations of the terms 'internationalisation' and 'globalisation' in higher education (Altbach, 2007; Brandeburg and de Witt, 2010; Cantwell and Maldonado-Maldonado, 2009; de Wit, 2011; Knight, 2008; Maringe and Foskett, 2010; Teichler, 2004; Verger, 2010). The debate is beyond the scope of this dissertation. Here, the term 'internationalisation' is preferred over the term 'globalisation' and is used in its literal sense of 'inter-national', as defined by Marginson and van der Wende (2006: 9) as "any relationship across borders between nations, or between single institutions situated within different national systems".

abroad may also constitute a strategy to gain entry to a foreign country to realise a longer term migration project (Coulon and Paivandi, 2003). The difficulties related to the recognition of previous educational qualifications and/or a lack of equivalence can shape the direction of skilled migration flows and even cause one skilled migrant to be treated as an 'unskilled' worker in the labour market of the destination country. Lastly, the characteristics of the higher education system and of available degrees, together with immigration admission policies, may play a fundamental role in influencing the choices of individuals and in determining *who can go* and *where*. In view of such an intricate connection (Robertson, 2011), this dissertation starts from the premise that it is impossible to understand student mobility and skilled migration in the contemporary age while ignoring the dramatic changes affecting the higher education sector worldwide.

A number of empirical studies have as well recently considered international skilled mobility and internationalisation of higher education in a jointly context. Nevertheless, the focus has been mainly on one particular aspect of the higher education internationalisation process: the cross-border mobility of students. This attention is attributable to the increased interest of countries in considering overseas students as potential skilled immigrants and to the proliferation of policies to attract and retain them after graduation. However, even if cross-border student mobility may constitute the most important aspect, it is nowadays but one facet of the internationalisation of higher education. As the title of this thesis indicates, the focus of this research is, instead, on transnational higher education (TNHE), which constitutes another expanding, if often neglected, feature of the internationalisation of higher education. TNHE involves the cross-border mobility of higher education programmes and/or institutions[3]. This means that, through it, students can get a foreign degree without having to move into the country of the education provider (Verbik and Merkley, 2006).

[3] The concept of TNHE is a disputed one: for instance, cross-border supply and studying abroad are also sometimes considered as forms of TNHE. In this dissertation, TNHE follows the definitions provided by GATE (1997) and the Council of Europe (2002), according to which transnational education denotes any educational activity "in which students are located in a different country from the one where the awarding institution is based" (Council of Europe, 2002). For the purposes of this thesis, this definition is restricted to educational activities that involve some physical "presence" of the awarding institution in the host country, thus excluding distance learning.

The new range of opportunities opened by the existence of TNHE may have an impact on the international mobility of students as well as on that of graduates, but a clear relationship has not been empirically identified as yet. The phenomenon of TNHE increasingly attracts the attention of stakeholders, policymakers and scholars of different disciplines: sociologists interested in internationalisation processes and higher education; geographers interested in international student mobility, higher education management and marketing researchers; political and social scientists interested in the changing roles of universities and nation states.

The relationship between TNHE, student mobility, and skilled migration has sparked intellectual curiosity and an on-going vibrant debate characterises current reflection on this issue. Varied, and frequently opposing, hypotheses have been made. On the one hand, it has been argued that the presence of TNHE in one country improves the offer of higher education in that country, meaning that individuals do not need to study abroad and, therefore, they will be less likely to work abroad after graduation (Bashir, 2007; Kapur and Crowley, 2008; Knight, 2003; Larsen and Vincent-Lancrin, 2002; Lien, 2008; McBurnie and Ziguras, 2007; OECD and World Bank, 2007; Vincent-Lancrin, 2008; Wilkins and Huisman, 2011; World Trade Organisation, 2001; Ziguras and McBurnie, 2015). However, on the other hand, it has been also contended that TNHE gives more individuals the opportunity to acquire a foreign degree, which may facilitate an emigration to work abroad, thereby exacerbating a brain drain problem (Chiang, 2012; Lien, 2008; Lien and Wang, 2012; Vincent-Lancrin, 2008).

Despite the interest in this subject, its relevance for both developed and developing countries and the continuous expansion of TNHE worldwide, no systematic work has to date empirically explored the relationship between TNHE and mobility of students and skilled workers. Existing empirical literature, in fact, focuses on other relevant issues connected with TNHE and has approached this aspect only marginally. Migration scholars and international economists interested in international migration, from the other side, have generally ignored the existence of TNHE when modelling international skilled migration and student mobility. The failure to account for TNHE is possibly connected with the scarcity of available comparable data. Certainly, the remarkable paucity of data makes the investigation particularly challenging. Still, the expansion of TNHE cannot be ignored. Its potential influence on international mobility of tertiary

students and graduates makes it relevant both from a theoretical as well as from a policy point of view, and the subject urgently requires empirical evidence.

This dissertation addresses this gap. A strong empirical character has been guaranteed by the use of data obtained from different sources (UNESCO/UIS, World Bank, Australian government, etc.) and of original information self-collected through a survey conducted in ten countries. This empirical character helps to shed light on the possible mechanisms at stake, favouring the development of an in-depth understanding of the link between TNHE and (im)mobility and giving a good sense of which existing hypotheses are worthy of further examination. The research also reveals the imperative need to harmonise the different strands of scholarship on this phenomenon, particularly encouraging migration scholars to take into account the existence of TNHE when analysing student mobility and skilled migration.

Merging theorisations of international student mobility, skilled migration, and internationalisation of higher education

One of the main aims of this dissertation is to bring theorisations of international student mobility and skilled migration together with theorisations of internationalisation of higher education. This thesis indeed starts from the assumption that we need to incorporate the various agents involved (individuals, higher education providers and governments) in the same theoretical frame to understand the way they are involved in the mechanisms of production and the circulation of knowledge, as was recently pointed out by Raghuram (2013).

Knowledge, usually conceived as institutionalised knowledge acquired in the higher education system (OECD, 1992), is indeed the category that binds together the three phenomena under study. International students move abroad primarily to acquire knowledge and credentials, whereas skilled migrants are those who, already endowed with such knowledge, use it in the labour market of another country. International students and skilled migrants can therefore be considered as different forms of "knowledge migration" (Findlay, 2011: 162). Higher education institutions are entities entitled to produce knowledge and to allow it to be accessed and acquired by individuals.

The concept of *competitiveness* is strictly related to knowledge and essential to understanding the rationale behind this thesis. The advent and the growing importance

of the notion of "knowledge economy" (OECD, 1996) has spread the idea that knowledge is a central component of economic development, enhancing economic performance and innovation (Lucas, 1988; Porter, 1990; Romer, 1990). This idea has gained force and broad recognition in the last decades. As a consequence, from a macro level viewpoint, capacity-building and the attraction of knowledgeable migrants have become imperatives to be pursued by countries, whereas the departure of skilled individuals and students is increasingly perceived as undesirable. From a micro level perspective, this also entails that, through the acquisition of knowledge, individuals can increase their migration opportunities (Raghuram, 2013) and enhance their competitiveness and "positioning" (Marginson, 2006) in the labour market. Knowledge is, in effect, believed to be a major enhancer of competitiveness (Drucker, 1986). Competitiveness has been defined as an equivalent of "productivity" (Porter, 2003), or as a "set of institutions, policies, and factors that determine the level of productivity of a country" (World Economic Forum, 2014). Nonetheless, the term suggests the idea of the ability to compete being assessed through comparison.

Competitiveness is therefore a controversial notion that simultaneously requires standardisation and distinction. Standardisation is needed in order to make comparisons and rankings possible; distinction is key to make something stand out, making it more competitive. In the race to keep up and rank well, competitiveness also leads to the emulation of others' successful strategies. According to Rinehart (1995), as a consequence of neoliberal globalisation, the "necessity of competitiveness" has become a sort of "ideology" that is "taken for granted" and manifests itself in various forms and at various levels – at the individual, institutional and country level.

The economic connotation of 'knowledge' and its association with 'competitiveness' has had consequences for the way knowledge is understood, produced and circulated. It has contributed to the commodification of higher education (Naidoo, 2007) and to the perception of students and skilled individuals as economic beings. It has stimulated the emergence of comparison measures (such as university rankings) and of common tendencies (such as internationalisation), which intrinsically act as tools for distinctiveness strategies. For example, even though world university rankings have been strongly criticised for their methodological limitations (Jöns and Hoyler, 2013), they are thought to enable students, higher education institutions, and countries to

pursue distinction, through a standardised comparison. Furthermore, on the one hand, internationalisation strategies, pursued by more and more universities, are also used as a demonstration of distinctiveness, i.e. setting an institution of higher education apart from its competition. On the other, the diversification and internationalisation of higher education have created the necessity to establish shared standardised mechanisms of quality assurance (Ntshoe and Letseka, 2010; Ziguras and McBurnie, 2015). At the macro level, countries that wish to enhance their competitiveness through the attraction of skilled migrants have to implement easy ways to measure the comparability of foreign degrees with domestic ones, also establishing clear criteria for validation and recognition.

All these tendencies have a normative impact of sorts on the global perception of what *valued* knowledge is and which the *valuable* higher education institutions are, likely shaping the notion of higher education quality. This can influence individuals' choice when deciding on what and where to study. Furthermore, these sorts of normative beliefs around 'good practices' can also involve the diffusion of "international models of policies and practices" (Steiner-Khamsi, 2004) and result in some convergence of higher education systems.

In the presented context, countries that want to be competitive in the global 'knowledge economy' theoretically have two ways to enhance their competitiveness: 1) to improve or expand their educational system to build capacity and/or 2) to attract students and skilled individuals from abroad. Because of demographic shortages, in the last few decades, OECD countries have had troubles adopting the first strategy and have thus implemented immigration policies in which knowledge becomes a central component of selection (Raghuram, 2013). Moreover, in order to distinguish themselves from other destinations and become 'more desirable', these countries have started to put in place "soft power" strategies (Nye, 2005), promoting their national culture and values abroad and to carry out "place branding/marketing" (Anholt, 2002; Papadpopoulos, 2004), promoting their "country image" (Metz, 2002: 96). As pointed out by Stetar et al. (2010), countries increasingly see universities as a means to increase this soft power.

While OECD countries are trying to attract skilled migrants and international students, many developing countries have long had concerns about the departure of skilled individuals and higher education students. Regarding this, the exceeding demand

for higher education and the difficulties in funding higher education through public money have encouraged many private education providers and foreign higher education institutions to enter the education market of these countries. These tendencies have often been actively favoured by governments in the hope that the attraction of international providers and the supply of higher education, corresponding to 'internationally recognised standards', could retain and attract students.

In the defined framework, TNHE is central. For countries where it is implemented, TNHE is considered a tool to produce, attract and retain knowledge. This makes TNHE a key constituent of these countries' strategies for fostering their global competitiveness and development. For many higher education institutions, the establishment of branches and programmes in other countries is a way to reach new markets and to enhance prestige, international reputation and competitiveness. Governments of OECD countries normally actively encourage these initiatives too. Nonetheless, in the agenda of these countries, TNHE seems to occupy a special place (Knight, 2010; Portnoi et al., 2010), characterised by a "complex interplay between competition and cooperation" (Portnoi et al. 2010: 10). According to Stetar et al. (2010), the relation between "cooperation and competition" is intricate precisely because of the "soft power strategies" governments and higher education institutions can use to obtain competitive advantage. For Sidhu (2007), who uses the Foucaultian concept of governmentality (Dean, 1999; Foucault, 1991) as a methodological and theoretical tool to analyse discourse on trade in education, the "developmental" argument has been brought to the table to ease the legitimisation of higher education trade liberalisation and to promote its uncritical acceptance among the different stakeholders. She particularly warns of the potentially important implication that the construction, diffusion, and promotion of particular definitions of "becoming global" (p. 200) and "economic success" (p. 223) can have on the attitudes and decision-making of the various stakeholders.

Considering this framework, a number of questions emerge: Is the mobility of higher education institutions, and the knowledge they produce and circulate, influencing the attitudes of individuals towards migration? Is TNHE instigating, shaping or reducing the mobility of students and skilled individuals? How is TNHE related to student mobility and skilled individuals? To what extent can TNHE help to deepen understanding on individuals' mobility?

Thesis outline

The thesis is structured into four chapters. The first one aims to provide important contextual elements and to frame the thesis in the current debate, highlighting the gaps in the existing literature and the need for empirical evidence. The remainder of the thesis consists of the compilation of three independent, self-contained research papers, which represents the empirical contribution of this dissertation. Even though the papers are autonomous, they represent integral parts of a single research goal which is a deepening of the understanding of the link between TNHE and the physical mobility of individuals. The scarcity of available data has represented the main difficulty of this research project. The goals and the methodological challenges of each paper and the way they have been addressed will be briefly presented below.

Chapter 2 presents the first empirical article, *Transnational Higher Education and Skilled Migration: Evidence from Australia,* which investigates the link between TNHE enrolment and subsequent skilled migration into the country of the education provider. The case analysed is the Australian one, which is particularly relevant because of the interest of Australia in recruiting skilled individuals, the strongly international character of its higher education system and the diffusion of its TNHE particularly in Asia, which is the continent where TNHE is mostly present. The case selection has been also motivated by the availability of data on TNHE enrolment, which have been provided by the Department of Industry, Innovation, Science and Research (DIIRSTE)[4] of the Australian government and which have allowed the performance of a panel data analysis. The dependent variable 'skilled migration' has been measured using data on skilled visas granted offshore which have been requested to the Australian Department of Immigration and Citizenship (DIAC). This methodological choice has assured a more accurate measurement of skilled migration compared with that obtained using Census information, normally used in macro level research on skilled migration.

Chapter 3 presents the second empirical article. As suggested by the title: *Transnational Higher Education and International Student Mobility: Determinants and Linkage*, this paper deals with TNHE and international student mobility[5]. The case

[4] Since 2013, Higher education section moved from DIIRSTE to the Department of Education.

[5] In this dissertation, "international student mobility" exclusively refers to *degree* student mobility, i.e. mobility to attend an entire study programme and obtain a diploma abroad. *Credit* mobility, i.e. short-

under study here is again the Australian one. The objective is twofold. Firstly, it investigates whether the macro determinants of traditional student mobility are also related to TNHE enrolment. Subsequently, it explores the link between the two phenomena in order to assess whether they could be considered as substitutes for each other, as has been often hypothesised. Compared with the only other existing attempt to investigate the link between TNHE and student mobility from a macro perspective, which is essentially descriptive (Tsiligiris, 2014), the analysis conducted here takes several contextual factors into account. The challenge of this paper was connected not only with the search for and obtainment of data but also with finding an accurate way to analyse the link between the two phenomena. The existence of many factors being connected with both types of enrolment simultaneously could result, if not taken into account, in spurious correlations. To deal with this issue, in the paper I use a methodology which addresses this potential simultaneity bias. Moreover, the use of Australian data on enrolment provides a fairly accurate measure of student mobility. Another important strength of the paper is that TNHE enrolment within the origin country, which does not imply any mobility, and TNHE in a third one, which can be consider a novel form of student mobility, are considered separately.

Compared with the first two empirical papers, the last article, *Transnational higher education and student (im)mobilities. Migration aspiration and capability of students enrolled in German transnational higher education*, presents a micro level study. The data analysed come from an online survey I designed and conducted in 2014 among students enrolled in eleven German TNHE programmes across ten countries. In order to ensure that all enrolled students were reached and that no other people could enter the survey, I conducted the study with the cooperation of the universities. Compared with previous surveys conducted among TNHE students (MacNamara and Knight, 2014; Wilkins et al., 2012), where the participants have normally been recruited using a convenience sampling strategy (Wilkins et al., 2012) or through a message placed in the main social network sites which could be entered by anyone (MacNamara and Knight, 2014), it represents a point of strength of the present research. The German case has been selected because Germany is currently one of the preferred destinations for international students and one of the major providers of TNHE worldwide. Furthermore,

term institutionalised mobility, is excluded from this general definition. In the thesis, when I refer to this type of institutionalised short-term student mobility, I do so separately and explicitely.

the German case allows the exploration of some important aspects, such as, for example, the role language and the offer of periods abroad in the country of the education provider play in students' decision-making and in future mobility aspirations. By using a mixed-methods approach, the paper offers an original in-depth examination of TNHE students' attitudes towards studying abroad at the time they took the decision of where to enrol and of the possible constraints and deterrents to mobility. In light of these attitudes, it also explores the meanings TNHE enrolment acquires for them, providing a rich range of insights which can be of benefit for future research.

The three papers that make up this thesis are not fully comparable. This is due to the different perspectives taken – macro level in the first two papers and micro level in the last one – and the different cases involved – Australian TNHE in the first two papers and German TNHE in the last one. However, together the papers expand our knowledge of the relationship between TNHE and the mobility of students and graduates. The accumulated results also serve as a springboard for brighter theoretical reflections, providing a set of questions that can further stimulate intellectual curiosity on the issue.

These reflections and questions are presented in the last part of the dissertation, which offers some concluding remarks. There, the results of the three empirical papers are summarised, drawn together and discussed in order to highlight their methodological and theoretical contributions, taking due account of their strengths and weaknesses. The importance and applicability of the results are also discussed and insights and suggestions for future research provided.

The dissertation also includes a short appendix which gives some additional information on the survey conducted and on the nature of the information gathered. In fact, by providing new data on a still understudied phenomenon, the survey itself constitutes a contribution *per se*. In the conclusion, some future possible applications of the data collected for the pursuit of other relevant research goals are also briefly evidenced.

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CHAPTER 1

SKILLED MIGRATION, STUDENT MOBILITY, TRANSNATIONAL HIGHER EDUCATION, AND THE 'GLOBAL WAR FOR TALENT'

Abstract: In this introductory chapter, the emergence and diffusion of transnational higher education (TNHE) are discussed in the broader context of the 'global war for talent' and worldwide changes in the higher education sector. The chapter also presents the unsolved debates on the consequences of TNHE with a particular focus on its potential impact on the mobility of tertiary students and graduates. The theoretical dilemmas which arise from a lack of empirical evidence relating to this subject are extensively explained. The chapter concludes with a presentation of the premises on which this research project has been built up.

Keywords: Global competition for talent; trends in higher education; TNHE definitions and volume; potential consequences of TNHE.

1. Introduction

This chapter provides some contextual elements and introduces the key concepts, topics, and issues which are fundamental to understand the rationale behind this thesis and its relevance. In the first section, the particular interest of countries in the retention/attraction of skilled individuals and tertiary students and the consequent policies they have implemented in the pursuit of these goals is contextualised in the framework of the so-called 'global war for talent'. Subsequently, the changes that have affected the higher education sector worldwide within the last decades, with particular focus on the internationalisation dynamics and the spread of transnational higher education (TNHE), are examined. The third section provides the definition of TNHE, its volume and the motivation behind its spread, also presenting the debate around the potential consequences of its diffusion. The fourth section presents the various hypotheses that have been made about the relationship between TNHE and physical mobility of people and offers a comprehensive review of the existing literature, highlighting the gap on this topic. This lack of focus in this area in the academic literature and the relevance of the issue inspire and motivate this research. The last section concludes with some important remarks which constitute the cornerstone of this research project.

2. The global war for talent

2.1 Targeting skilled migrants

A belief in the importance of skilled individuals for the development of a country is not new. It was already present in the Sixties when the notion 'brain drain' was first coined to refer to the negative consequences of the emigration of British scientists to North America (Freitas et al., 2012). In the subsequent decades, the term was largely used within the broad framework of development debates to highlight the importance for poor origin countries of retaining their skilled individuals. The debate shifted slowly in the Eighties towards the positive influence of skilled workers for the welfare of destination countries in a "changed world economy" (Drucker, 1986). From the Nineties, the phenomenon of skilled migration has come to occupy a central position in the agenda of scholars and policy-makers. This centrality is closely related with the

growing acceptance gained by the notion of "knowledge-based economy" (OECD, 1996) and its accompanying idea, strongly influenced by the work of Porter (1990), Lucas (1988) Romer (1986; 1990) and Florida (2002; 2005), that education and knowledge play a crucial role in fostering economic growth and competitiveness (Papademetriou et al., 2008). These ideas have been actively disseminated by international organisations over a significant period of time (Leuze et al., 2007).

Increasingly faced with demographic shortages (Blossfeld et al., 2012), OECD countries have, in light of convictions about the benefits of skilled migration discussed above, started to implement a number of policies to select immigrants and to actively attract and retain skilled workers because of the benefits they are perceived to bring in terms of socio-economic welfare (Boeri, 2012; Boeri et al., 2002). Skilled migrants are also considered to integrate more easily in the host society and they do not create tensions with the native population because they are not generally seen as competitors by unskilled natives in the access to public subsidies and services (Brücker et al., 2012). This is why more and more countries are redesigning their immigration admission schemes to make them more skill-selective (Brücker et al., 2012). This context has been often described as the "global hunt for talent" (Kapur and McHale, 2005), "global war for talent" (Michaels et al., 2001), "the global competition for talent" (Florida, 2005), "*die Wettbewerb um die beste Köpfe*[6]" (Blossfeld et al., 2012: 20), the "battle for brains" (Brücker et al., 2012).

'Skilled migrants' hence nowadays seems to constitute a particularly 'welcome[7]' and, in a certain sense, 'privileged[8]' category of migrants. The interest towards skilled individuals has increased attention in another type of migration and fostered a closely connected "migration channel" (Tremblay, 2004, 2005): that of international students who enter a country to acquire a tertiary education degree.

[6] In English: "the competition for the best heads",

[7] This does by no way mean that skilled migrants are able to freely circulate. In fact, even if many countries are trying to reorientate their immigration schemes to favour the entry of skilled professionals, in practice, many barriers, often of bureaucratic nature, still hinder their mobility and 'circulation'.

[8] An inspiring reflection on the ethical issues raised by the migrants' selection based on skills can be found in Zapata and Pasetti (2015).

2.2 International student mobility and skilled migration: a longitudinal link

Intrinsically temporary because aimed at the acquisition of educational credits and/or a degree, through participation in university courses of limited duration, student mobility often converts into permanent stocks of skilled migrants (Meyer and Brown, 2004; Salt, 1997). According to the OECD (2014), international students are the temporary migrants who are more likely to settle permanently. This close link between student mobility and skilled migration has been highlighted by several scholarly papers (Borgogno and Vollenweider-Adresen, 1998; Cervantes and Guellec, 2002; Dreher and Poutvaara, 2011; Ennafaa and Paivandi, S. 2008; Felbermayr and Reczkowski, 2012; Finn, 2007; Meyer and Brown, 2004; OECD, 1998; 2002; Rosenzweig, 2008; Rovet et al., 1998).

Rosenzweig (2008) notes that international students are likely to stay in the host country to work after having completed their studies because, as noted by the same scholar in a previous study (Rosenzweig, 2006), foreign education provides its owners with a higher probability of finding a job in the training countries (due to the better recognition of diploma, knowledge of the culture and language, network ties, etc.). Studying abroad can be the source of a desire to remain in the country where the degree was pursued (Ennafaa and Paivandi, 2008; Paivandi, 1991). Some students, furthermore, may find it difficult to come back to their origin countries after having spent years in a very different country (Borgogno and Vollenweider-Adresen, 1998; Sidhu et al., 2007). The decision to study abroad can also be part of a planned strategy to gain entry to a country (Baas, 2006; Findlay and King, 2010; Robertson, 2009) in order to realise a pre-existing migration project (Coulon and Paivandi, 2003; Ong, 1999; Rosenzweig, 2006). Ultimately, higher education is, for individuals, a "positioning strategy" in the labour market (Marginson, 2006). Hence, the choice of diploma and the country of study is usually made taking into account the employment opportunities that this choice will open up in the country of origin and/or abroad (Hashim, 2007).

In light of the above, the admission of overseas students is increasingly considered a promising way to expand skilled migration (Kuptsch and Pang, 2006; Li et al., 1996; OECD, 2009). The "train and retain" formula (Suter and Jandl, 2008) has become a widespread strategy followed by countries wanting to attract skilled migrants (Brücker et al., 2012). It consists of the implementation of specific migration policies to favour

former students in the selection process of prospective immigrants, to promote their temporary or permanent settlement (Tremblay, 2005; Vincent-Lancrin, 2008) and to facilitate their access to the labour market after graduation (Dreher and Poutvaara, 2005; Kuptsch and Pang, 2006). This kind of strategy is considered by destination countries as particularly attractive essentially because of the "high integration potential" of former students (Chiswick and Miller, 2011). Compared with skilled migrants who had never lived in the destination country, former international students have recognizable qualifications (Vincent-Lancrin, 2008), already adapted to the host country labour market (Kuptsch, 2006). Former international students also know the language and they have become familiarised with the culture of the destination country (Kuvik, 2015; Ziguras and Law, 2006; Ziguras and McBurnie, 2015) and have established social ties there. Former international students have also already "passed the test" of living abroad (Favell, 2008; King and Ruiz-Gelices, 2003) and when applying for staying in the host country, are more aware of the consequences of their choice.

Recruiting students from abroad is not only a strategy for governments to address skill shortages (Stromquist, 2007). It also constitutes a good way to maintain active study programmes which would otherwise be at risk of termination (Brook and Waters, 2011), and provides good source of financial revenue (through the, often higher, tuition fees they pay). This aspect has been very important, especially in some countries, considering the cuts on government spending in tertiary education. For many countries, international students thus constitute a real business (MacReady and Tucker, 2011). Given such importance of international students, marketing programmes and governmental internationalisation agencies with the task to attract them proliferate and have growing importance (Kuptsch, 2006; Urbanovic et al., 2014).

In this context, universities are thus increasingly considered a valuable source of "human capital" and a possible "stepping stone" towards a permanent migration (Vincent-Lancrin, 2008, 120). From the other side, the prospect of migration given by immigration policies to former students plays a major role in explaining the attraction of overseas students to the universities of some countries because of the additional range of opportunities it opens up, even among those students who, at the moment of matriculation, do not aim at settling abroad permanently (Ziguras and Law, 2006).

According to Ziguras and Law (2006), the social and economic benefits of these kinds of policies for the destination country and for individual students are guaranteed. What it is less clear, they argue, are the benefits/losses of these kinds of undertakings for the student's home country.

2.3 The perspective of developing countries

In many developing countries the demand for higher education has exceeded the supply, so many students have gone overseas to study abroad (Ziguras and Gribble, 2015). Many of them, as it was already highlighted, tend to stay overseas after graduation, resulting in a brain drain for the country of origin. The policies implemented by the destination countries seem to increase this kind of dynamic (Ziguras and Law, 2006). The traditional sending countries of skilled migrants and tertiary students try, therefore, to implement policies in order to retain them in the country or to convince them to return back.

In this context, higher education becomes central in the development strategies of both developed and developing countries (Naidoo, 2007). It is widely believed that if students could be trained in the origin country, they would not need to go abroad to study. For this reason, the opening of the education market to foreign education providers has often been proposed as a possible solution to retain tertiary students in the country and, in this way, prevent their permanent emigration after graduation (Kapur and Crowley, 2008). It is also argued that foreign programmes could themselves act as a magnet, transforming the country where they are implemented to a potential destination country for overseas students. The presence of foreign providers could provide jobs for local people and expand infrastructure, thereby preventing the migration of graduate individuals (Kapur and Crowley, 2008). In the search of these benefits, in many countries, therefore, governments have actively encouraged TNHE provision as "a key to build capacity" (McBurnie and Ziguras, 2007: 4). However, there is no empirical evidence of the impact of TNHE in decreasing student mobility and/or stemming skilled emigration yet. Furthermore, higher education institutions from developed countries that implement TNHE do so in the hope to reach more students and not to decrease the enrolment of students who study directly in their home campuses.

In order to better understand the possible impact of TNHE, it is important to focus on how it has developed and what the goals behind its implementation are both from developed and developing countries' perspectives. To do this, we have to view the spread of TNHE within the broader context of changes which have affected the higher education sector worldwide within the last decades.

3. Internationalisation of higher education

For nearly three decades important changes have affected higher education worldwide (Leuze et al., 2007). According to Martens et al. (2007), these changes are attributable to two main trends: the increasing role of international organisations and the marketization of higher education.

3.1 The role of international organisations

International organisations have had an active role in shaping changes in the higher education sector in many ways (Malee Bassett and Maldonado-Maldonado, 2009; Martens et al., 2007). Their influential activities include the production of data and statistics, the setting and structuration of education policy agendas (Finnemore and Sikkink, 1998), the organisation of conferences, the provision of reports and policy papers, essentially aimed at disseminating ideas, such as those around the "knowledge-based society", the importance of economic competitiveness and the international liberalisation of trade (Brooks and Waters, 2011; Leuze et al. 2007; Verger, 2010).

International organisations also had a crucial role in determining educational policies in developing countries, where, under their influence, recommendations and loans, public spending has been more usually placed essentially in primary education and literacy rather than on more advanced education (Altbach, 2009; Naidoo, 2011b). As a consequence of such policies, condensed in the World Bank and International Monetary Fund structural adjustment programmes (Verger, 2010), in many countries, the growing demand for higher education has remained unmet and pushed students to seek higher education overseas. More recently, it has also motivated governments of these countries to 'open the door' to foreign education providers from developed countries (Barrow et al., 2004; Naidoo, 2011b).

Maybe not accidentally[9], the international organisations' prescriptions for middle-low income countries have met the interests of education exporting nations (Naidoo, 2011b), which are increasingly interested in recruiting overseas students, not only as potential skilled immigrants, but also to combat increased competition caused by the increased marketization of the higher education sector. Higher education in developing countries has this way become a potential 'market' for developed ones.

3.2 The marketization of higher education

The marketization of higher education consists of the transformation of education into a tradable commodity through the application of market principles in the management of higher education institutions. The introduction of a performance-based model of resource allocation and the cut of governments' subventions causes a form of dependency for universities on external funding (especially to finance research) and student tuition fees. The result is strong competition among universities to attract tuition-paying students (who are more and more considered as customers), to secure research funding (Leuze et al., 2007) and to obtain a good placement in the international university rankings, which are increasingly important (Altbach, 2009; Marginson, 2011). The marketization also involves the admission of private agencies as new education providers (Varghese, 2004), this trend being particularly strong in countries with low-middle income (Levy, 2002; 2011; McCowan, 2004). These private providers are often the main partners of foreign institutions which want to provide educational services offshore but do not want and/or cannot establish their own campus (Levy, 2006).

The marketization has encouraged a process of internationalisation, motivated by the search for new market opportunities and more competitiveness (Marginson, 2011). The above mentioned growing unmet demand for higher education in many developing countries has constituted a big opportunity for many educational institutions from Western countries (van der Wende, 2003). In fact, the active recruitment of overseas students, often accompanied by an incremented amount of tuition compared with that requested to domestic students and the provision of services offshore have constituted

[9] According to Robertson (2009: 114), the World Bank and the other international organisations "tend to work in the interests of the developed economies rather than low-income developing economies".

for them valuable revenue generating opportunities (Leuze et al., 2007; McBurnie and Ziguras, 2001; van der Wende and Middlehurst, 2004).

Some authors have used different, often critical, labels to define all these trends in the higher education sector worldwide: "entrepreneurial university" (Clark, 1998), "knowledge factory" (Aronowitz, 2000), "commercialisation of higher education" (Bok, 2003), "academic capitalism" (Slaughter and Leslie, 1997; Slaughter and Rhoades, 2004), "multinational university" (Van Rooijen et al., 2003).

3.3 The role of the state

As can be seen, the state is no more the sole agent in designing and determining educational policy, rather different agencies (public and private, local, national and international) are increasingly influential in this domain (Leuze et al., 2007). This does not mean that states have lost their importance. Governments still play a crucial, even if maybe altered, role[10]. In fact, these developments have often been actively facilitated by governments, which are normally involved in such dynamics because of their above mentioned interest in retaining and attracting tertiary students and graduates. Governments can encourage foreign providers to enter their educational market or actively restrict them from doing so. The development of global education hubs is also the result of different governmental initiatives, which constitute clear examples of the relationships between national-level policy and the internationalisation of higher education (Mok, 2011). Governments, furthermore, implement policy to encourage students to stay in the country or to come back if they are abroad. As has already been highlighted, through the implementation of their immigration policies, states can influence students' and skilled individuals' migration flows. Furthermore, for many OECD countries, particularly Australia, New Zealand, the UK and the US, higher education has become a major "export industry" (OECD, 2004; Martens and Starke, 2006; Rodríguez Gomez, 2005). These countries had a key role in promoting the liberalisation of higher education under the General Agreement on Trade in Services (GATS) of the World Trade Organisation (Martens and Starke, 2006; McBurnie and Ziguras, 2003).

[10] According to Sassen (2010: 2), globalisation has to be understood not as an interdependence of states by global institutions, rather as a process which "inhabits and reshapes the national".

3.4 International trade in higher education

Under the GATS, the global competition in the field of higher education becomes a paradigm (Verger, 2010)[11]. The GATS promotes the "trasnationalisation of higher education" (Verger, 2010: 3) in four "modes", which give a comprehensive picture of the existing internationalisation activities in the higher education sector:

- Mode 1: Cross-border supply (e. g. distance education, e-learning).
- Mode 2: Consumption abroad (i.e. international mobility of students).
- Mode 3: Commercial presence (i.e. provision through TNHE).
- Mode 4: Presence of natural persons (i.e. temporary mobility of teachers and staff).

In this dissertation, the focus is on TNHE, which is envisaged in mode 3 of the GATS and consists of the possibility for foreign investors to enter the 'educational market' of another country. However, it should be pointed out that the different modes of provision are not mutually exclusive. In fact, the establishment of programmes and campuses abroad normally also entail the temporary mobility of professors and administrative staff. As it will be further highlighted later on, TNHE programmes also often offer the opportunity to realise short-term study abroad periods in the home institutions.

4. The spread of TNHE

4.1 Facts and figures

One of the first official definitions of transnational education (TNE) comes from the Global Alliance for TNE (GATE, 1997):

> "TNE denotes any teaching or learning activity in which the students are in a different country (the host country) to that in which the institution providing the education is based (the home country)" (GATE, 1997: 1).

A similar definition was adopted by UNESCO and the Council of Europe in the *Code of Good Practice in the Provision of Transnational Education* (2002: 2).

TNHE includes several types of provision modalities. Naidoo (2009) offers a list and explanation of the most common TNHE activities (see box 1).

[11] Apart from the GATS, an increasing number of regional and bilateral free trade agreements (often named with the abbreviations: RTA, BTA and/or FTA) which also envisage the liberalisation of education (often in a more "aggressive" way than the GATS), also exists (Verger, 2010: 38).

Box 1: Types of TNHE

FRANCHISING: An education provider from country A (the franchiser) gives another institution from country B the right to deliver an educational programme within country B or other countries. Country A awards the qualification.

TWINNING DEGREES: An education provider from country A collaborates with an institution from country B allowing students studying at the latter institution to transfer credits to the institution in country A. In this case, the qualification is conducted normally partly in country A and partly in country B.

PROGRAMME ARTICULATIONS: Students undertake part of a qualification in an institution in another country. The credits obtained there are then transferred in the source country's institution.

CORPORATE PROGRAMMES: Some multinational corporations have their own higher education institutions and/or programmes of study, offering qualifications not affiliated with any national system.

DISTANCE LEARNING: The education service is provided via a communication interface.

Source: Naidoo (2009: 315).

To these types of TNHE activities, it is possible to add another one, which is known as 'foreign-backed universities' or 'bi-national universities'. Lanzendorf (2008a) defines these as independent universities, which are academically associated with and 'backed' by one foreign university (or a consortium of several ones). The mentoring university takes charge of curriculum development, the training of local teaching staff, quality assurance, fundraising activities and export of staff. This type of provision is especially undertaken by Germany, but also by US and British universities and, more recently, by French, Canadian and Swiss ones (Lanzendorf, 2008b). Australia has still not undertaken this kind of activity.

Detailed and complete data on the volume of TNHE activities worldwide are still very limited. Comprehensive data do not exist and the data that exist are hardly comparable. The Observatory of Borderless Higher Education (OBHE) issued in 2012 a report containing a list of existing international branch campuses worldwide (Lawton and Katsomitros, 2012). At the beginning of 2015, another list of branch campuses was published (and, since then, continuously updated) by the Cross-Border Education Research Team. However, the definitions of branch campuses used in the two reports are slightly dissimilar. The OBHE report defines a branch campus as:

> "A higher education institution that is located in another country from the institution which either originated it or operates it, with some physical presence in the host country, and which awards at least one degree in the host country that is accredited in the country of the originating institution" (Lawton and Katsomitros, 2012: 2).

The Cross-Border Education Research Team, instead, uses the following definition of branch campuses:

> "An entity that is owned, at least in part, by a foreign education provider; operated in the name of the foreign education provider; engages in at least some face-to-face teaching; and provides access to an entire academic programme that leads to a credential awarded by the foreign education provider" (Cross-Border Education Research Team, 2015).

Because of these divergences, the two lists are rather different. This demonstrates how, in practice, it is difficult to differentiate programme partnerships and branch/offshore campuses (Kritz, 2006). A very recent paper by Healey and Michael (2015) has focused on this increasing complexity and multidimensionality of TNHE partnerships and activities.

The same happens in the case of data on enrolment in TNHE: where they are collected, the criteria used are different, making comparisons very hard. According to Ziguras and McBurnie (2015: 129) it is very difficult to know the global volume of TNHE because there is "no intergovernmental agency that collects data on transnational enrolment". The only two countries to systematically have collected data on how many students are enrolled in their TNHE activities are the UK and Australia. UK data, provided since 2007 by the Higher Education Statistics Agency (HESA), makes a distinction between enrolment in programmes delivered in the framework of a partnership (franchising, twinning arrangements, etc.) and enrolment in UK branch campuses. The data are collected only by campus location and lack information on the country of origin of the students. Australian data, provided by the Department of Education of the Australian government[12], have been collected since 2002 and do not distinguish between types of TNHE provision, but include information on students' country of birth, citizenship and on the location of the campus where they are enrolled. As remarked by MacNamara et al. (2013), distance learning is not included in

[12] Until 2013, they were collected by the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) of the Australian Government.

Australian statistics. The German Academic Exchange Service (DAAD) also provides some figures on approximately how many people are enrolled in German TNHE worldwide. However, for the DAAD joint-degrees do not constitute TNHE (MacNamara et al., 2013).

Even if hardly comparable, these data give an idea of the importance and volume of the phenomenon. In the UK, in 2012/2013, there were more students studying in the framework of British TNHE than international students enrolled directly in the UK. Actually, more than 25% of the students studying for a British award were doing it wholly overseas[13]. Regarding Australia, in 2013, more than 25% of the international students studying in Australian higher education institutions were enrolled offshore[14]. Even if data on enrolment in German TNHE are not systematically collected, the DAAD has recently broadly estimated that, in 2012, more than 20 000 students were enrolled in German TNHE (Geifes and Kammüller, 2014). These figures give only partial account of the extension of TNHE worldwide. More and more countries are active in providing higher education services offshore (France, Russia, Switzerland, Canada, but also, more recently, India, Malaysia and China), but no data are available on how many students are enrolled in these TNHE activities. Similarly, no data are available for the US, which constitutes the biggest player in the TNHE arena. A report released in 2011 by the Institute of International Education (IIE) shows that American institutions are the most active worldwide in offering dual-degree programmes (Obst et al., 2011). According to Lawton and Katsomitros (2012), the US is also the country with more branch campuses abroad. Ziguras (2011) approximated a global enrolment in TNHE of around 500 000 students. According to Wilkins (2011: 74), Arab Gulf states "have been the largest recipients of TNHE globally".

There are reasons to think that the phenomenon of TNHE is going to increase. According to Skidmore and Longbottom (2011),

[13] Of the 2.340.275 students studying at UK higher education institutions in 2012/13, 598.925 were enrolled through TNHE (i.e. registered at a UK higher education institution or studying for an award of a UK higher education institution). This number surpasses the number of international students studying directly in the UK (425.265). See: https://www.hesa.ac.uk/pr199 (last accessed Nov. 20, 2014).

[14] In 2013, of the 328.402 international students studying in Australian higher education institutions, 84.785 did it at campuses outside Australia and 25.331 were distance education students. See: https://internationaleducation.gov.au/research/Research-Snapshots/Documents/Transnational%20education_HE_2013.pdf (last accessed Nov. 20, 2014).

> "As Third World nations develop large middle classes, and their governments seek to educate a growing affluent population, there will continue to be opportunities".

Higher education institutions offer educational services through TNHE to reach more students and to expand recruitment "while avoiding home campus capacity constraints" (Ziguras, 2008: 7).

For the home countries of higher education institutions which operate offshore, the possibility of intensifying recruitment directly abroad not only represents a financial gain, but also an efficient tool of "public diplomacy" (Ziguras and McBurnie, 2015: 32-34), helping developing closer useful relationships, building up an alumni community of future business leaders and professionals, linked with the country of the education they received. As expressed by Australian Education International (AEI), the arm of the Australian government that promotes international partnerships in education, TNHE

> "plays a key role in building the long-lasting friendships, business and cultural relationships that develop between students, staff and community members. International engagement through education (…) makes an immense contribution to building constructive and positive social, cultural, intellectual and economic ties between countries" (Australian Education International, 2005: 1).

As was already noted, countries which explicitly open their educational market to foreign providers aim at increasing enrolment in higher education, to satisfy the demand for higher education and to retain student outflows and the possible consequent brain drain (Wilkins and Huisman, 2011; Ziguras, 2011). Many of them have implemented policies in order to become global education hubs in the hope of retaining their students and attracting international students from abroad. The hope is often also that the attracted students stay after the completion of study and that the presence of foreign universities will also increase the country's soft power and global influence (Mok, 2011). There are six main countries acting this way in the last decades: Singapore, Malaysia, Hong Kong, the United Arab Emirates, Qatar and Bahrain (Knight, 2011), but Bhutan, China, Hong Kong, Kuwait, Mauritius, Oman, Saudi Arabia, South Korea, Sri Lanka, Taiwan and Vietnam have also started to open their higher educational market to foreign providers (Urbanovic et al., 2014). It should be, however, pointed out that TNHE is not only present where countries actively promote it. In fact, even in countries

where foreign providers are not allowed to offer degrees, TNHE can be present anyway, for example through the cooperation with local private partners, etc. (Ziguras and McBurnie, 2015).

4.2 The consequences of TNHE: an unresolved debate

Opinions on the consequences of "extra-national provision" of higher education (Ziguras, 2011) are strongly divided. On the side of its advocates, there are governments of the major higher education exporting countries (particularly the US, the UK, Australia and New Zealand) and international organisations (especially the OECD, the World Bank and the World Trade Organisation). From this side, the rewards of a wider and diversified access to higher education are pointed out. According to these claims, TNHE seems to signify more access to higher education, diversified educational programmes, higher quality and prestige. It enables a counteraction against difficult to access and/or elitist local higher education systems. It can overcome discrimination against particular ethnic groups, a practice which has been, for a long time, been rife in the public higher education sector of some countries (for example, in the case of non-Bumiputras in Malaysia), and which have caused people belonging to these ethnic groups to seek higher education abroad (Sidhu, 2006). It is also claimed that, for many countries, which have significantly invested in other levels of education and do not have the means to finance higher education, TNHE enables capacity-building. Furthermore, it makes it possible for a broader group of students to access an international education, studying abroad still representing a very expensive undertaking. If "international students are buying their way into the global knowledge economy", (Gürüz, 2008, cited by Ziguras, 2011: 121), then TNHE can permit more students to access this valuable opportunity.

On the other side, critics of TNHE are very harsh in their judgement. It has been argued that TNHE can exacerbate inequalities in access to higher education, since TNHE programmes are normally privately self-financed by students, thus aimed primarily at upper socio-economic groups (Kapur and Crowley, 2008, Ziguras and McBurnie, 2015). Another concern is related to the wage differentials between domestic and private/foreign higher education institutions which can result in an "internal brain drain", i.e. the loss of the most talented teachers from the public higher education sector

(Kapur and Crowley, 2008). Furthermore, the fear is that foreign providers will not consider local traditions and culture, undermining the sovereignty of the state in regulating higher education and nation-building policies. The most severe opponents see the "transnationalisation of universities" as "the cornerstone of the neoliberal project" (Naidoo, 2011a: 175), a potential new form of colonialism (Altbach, 1995; 2004; Welch, 2011) with international organisations promoting the "institutionalisation of international influence" (Naidoo, 2011a: 175). As stated by Mollis (2011: 309):

> "the geopolitics of knowledge and power [is] dividing the world into countries that consume knowledge produced by the countries that culturally and economically dominate globalisation, while the latter assign universities in the periphery to an economic function of producers of 'human resources'".

In this sense, trade in educational services "may become a new dependency mechanism between the North and the South" (Verger, 2010: 57). Usually, in fact, universities from richer countries are those which have the means to provide educational services offshore and set up branch campuses abroad, as opposed to universities in poorer countries which do not have the means to do this (Verger, 2010).

In a recent report for the British Council, McNamara et al. (2013: 45) list both the potential benefits and risks for countries where TNHE is implemented, distinguishing five categories of impact: status, socio-cultural, academic, economic and human resources development. According to this list, TNHE can enhance the international status of one country's higher education sector, but also compromise this status if quality is not assured. From the socio-cultural perspective, exposure to a foreign language and culture is listed among the socio-cultural benefits, even though the overuse of foreign language, the potential cultural tensions and losses/changes of cultural identity are mentioned as risks. TNHE benefits the academic environment of the countries where it is implemented because it provides increased and diversified access to higher education, as well as the opportunity to profit from updating practices of learning, teaching, curriculum development, etc. However, McNamara et al. (2013) point out that if no accreditation system is in place, quality provision cannot be guaranteed. Furthermore, they also highlight that curricula taught may not be relevant to the local context and culture, as well as the problem of competition between local and foreign providers to enrol students. Another problem is, then, connected to the possibility that foreign qualifications may not be recognised. This is closely related to

the possible problem that arises if foreign provision does not meet labour market needs and does not address the skill gaps of the country where it is implemented. Concerning the issue of brain drain, McNamara et al. (2013) argue that TNHE presence in a neighbouring country can increase brain drain to that country, but also, as a mirror, it can increase brain gain for the country where it is implemented and diminish its brain drain if its students stay in the country. If TNHE decreases student mobility, it also may decrease the outflow of currency that results from students seeking higher education abroad. Nevertheless, there is also the possibility that well trained tertiary graduates, after having been in contact with a foreign culture, having studied in a foreign language and gaining a foreign degree, will be more likely to be attracted by the prospect of working abroad. This is even more likely if the foreign degree acquired is not recognised in the origin country and/or if it does not address its skill gaps.

As can be observed, the most intriguing feature of this dispute between advocates and critics of TNHE is that benefits and risks of TNHE provision are constantly presented as "the obverse of each other" (McBurnie and Ziguras, 2015, 144), resulting in unresolved debate. It is clear that one of the core issues of this unresolved debate concerns the capacity-building potential of TNHE and its role in increasing or diminishing students' and skilled workers' emigration. Empirical studies on this aspect are almost non-existent but several theoretical conjectures have been made. The next section presents in a deeper manner this debate, highlighting the gap in the literature and the need for empirical evidence.

5. TNHE and (im)mobility

5.1 Brain Training – Brain Draining

According to Vincent-Lancrin (2008), the existence of TNHE can theoretically have an influence on immediate mobility, i.e. influencing the flows of tertiary students, but also on the subsequent mobility of individuals, i.e. influencing mobility after graduation. Several, often contradictory, hypotheses feed the current debate on this issue.

5.1.1 'Trained' vs. 'drained'

One of the main hypotheses which have been made concerns the fact that TNHE allows students to find attractive alternatives to mobility in traditional destinations and for

countries that are open to foreign suppliers a strategy to retain its students and to attract international students from abroad (Kapur and Crowley, 2008; Larsen and Vincent-Lancrin, 2002; Wilkins and Huisman, 2011). As TNHE does not imply the same cultural and linguistic experience of a stay abroad (Vincent-Lancrin, 2008), it may also reduce the brain drain which could arise from student mobility (Larsen and Vincent-Lancrin, 2002: 34). Furthermore, enhancing the quality of the higher education sector in one country, creating new job opportunities and a more motivating academic and professional environment, would also retain and attract tertiary graduates (Bashir, 2007; Kapur and Crowley, 2008; McBurnie and Ziguras, 2007; OECD and World Bank, 2007; World Trade Organisation, 2001; Ziguras and McBurnie, 2015). These kinds of hypotheses seem to start from the theoretical assumption that people study abroad because they want to acquire a degree which is not available in the country of origin and that the overstay decision of former international students is due to causes that occur during or after their stay abroad (e.g. change of aspirations, 'second acculturation' problems, training not being recognised or applicable in the origin country, etc.). According to Waters (2008), for many students the overseas nature of the degree is of secondary importance. They study abroad because they have failed academically in the local system or anticipate failing (Brooks and Waters, 2009; 2011). Study abroad can also be related to systematic discrimination towards specific social and ethnic groups in the origin countries or to gender disadvantages (Brooks and Waters, 2011). In these cases, TNHE could become a good substitute for studying abroad.

However, studying abroad is often a means to acquire a quality (or prestigious) degree, allowing the student to be more competitive in the labour market of the origin country and/or abroad (Brooks and Waters, 2011). According to Brooks and Waters (2011), it is possible that a "differentiated international education" is going to emerge, where studying abroad will always be considered more prestigious and where mobile individuals will be more advantaged in the labour market compared to non-mobile ones. If this becomes the case, then TNHE will not be considered as an equivalent option, but maybe as a second-choice for those who do not have the means to study abroad. Furthermore, existing research has shown that international students often go abroad with a "residential strategy" (Coulon and Paivandi, 2003: 45; Ong, 1999). If international education is considered a "ticket to future international mobility" (Brooks

and Waters, 2011), TNHE enrolment may not be considered as appealing as the option to study abroad and TNHE is thus absorbing another segment of students.

According to Altbach and Knight (2007: 294), TNHE is prevalently "demand-absorbing", providing access to students who could otherwise not attend tertiary education. In this way, TNHE is not acting concurrently with onshore provision (Hahn and Lanzendorf, 2009). Actually, the major exporting countries of higher education and the higher education institutions which provide higher education offshore are surely not interested in seeing the flow of their international students reduced, rather they aim, through TNHE, to broaden their reach to students who, for different reasons, have neither the willingness nor the capacity to go abroad (International Education Advisory Council, 2012; McNamara and Knight, 2014; Van-Cauter, 2013).

Nonetheless, the lack of empirical evidence makes the same education exporting countries worry that TNHE could, in the long run, cannibalise the demand for international education onshore, challenging universities which rely upon continually attracting international students to their home campuses as well (MacReady and Tucker, 2011; Shields and Edwards, 2010). It has therefore been forecasted that, in the future, some countries may decide to diminish the TNHE offering in order to prevent this outcome (British Council and Oxford Economics, 2012). Moreover, TNHE is a "risky-business" (McBurnie and Ziguras, 2007). A failure of a TNHE enterprise could also prejudice the students' perceptions of the home campus, thereby likely causing a decrease in onshore enrolment.

As can be seen, a clear relationship between TNHE and student mobility is far from being empirically assessed.

5.1.2 'Trained' and 'drained'

Whether or not TNHE is decreasing student mobility, there is still not an empirical assessment as to the extent to which TNHE prevents migration after graduation (OBHE, 2006). In fact, even though some authors suggest that TNHE creates job opportunities and a stimulating environment for young skilled people (Bashir, 2007; Kapur and Crowley, 2008; McBurnie and Ziguras, 2007; OECD and World Bank, 2007; World Trade Organisation, 2001; Ziguras and McBurnie, 2015), other argue that TNHE may increase brain drain (Chiang, 2012; Lien and Wang, 2012), by exposing more young

people to an international educational experience that can influence their migratory behaviour at the end of the studies. Additionally, TNHE qualifications are recognised in the country of the education provider and this can favour mobility (Vincent Lancrin, 2008).

For Ziguras and McBurnie (2015), even though graduates who study in TNHE programmes may not have the same level of attachment to the country of the educational institutions, this attachment can be fostered by encouraging short-term mobility and engaging former students as alumni.

According to Sassen (1988), it is fundamental to explore the objective and ideological linkages between migrants' sending and receiving countries and the way they have been established. In her reflection, she identifies foreign investment as a migration push factor when it is directed to labour-intensive export-oriented sectors, essentially because workers of an offshore plant or office, who are producing goods for people and firms in highly industrialised countries, may start to more readily consider emigration as an actual option. The reflections of Sassen, even though they apply to the emigration of low-skilled workers, allow a consideration of whether similar mechanisms could apply to skilled migrants who have been trained in offshore educational programmes of Western universities.

Macro level research on the determinants of international migration has shown that the 'distance' (not only geographical, but also linguistic and cultural) between countries plays a crucial role in explaining international migration (see, for example, Bessey, 2010; Czaika and Parsons, 2015; Brücker et al., 2012). Certainly, the presence of educational programmes from a particular country in another one decreases, in a certain sense, this 'distance'.

In addition, TNHE activities may be seen by the educational exporting countries as an integral part of their "place branding" strategy (Papadpopoulos, 2004) to promote the country and its values, to increase visibility of its higher education sector worldwide, to diffuse marketing initiatives and enhance country-image abroad. Available information on one country and the perception people have of that country could influence individuals' mobility choice, in particular with regard to choice of destination.

TNHE also often entails short-term stay periods abroad in the country of the educational institution (Vincent-Lancrin, 2008). Past research has shown that a study

period abroad during the degree increases the likelihood of working abroad after graduation (King and Ruiz-Gelices, 2003; Parey and Waldiger, 2011).

5.1.3 'Trained' to be 'drained'

According to Brooks and Waters (2011: 123), the incorporation of short-mobility in British TNHE programmes can be considered as a "way of ensuring a steady stream of international students into UK higher education institutions". According to a report by OBHE (2008), many students at German-backed universities spend one year in Germany and it is expected that a number of graduates of these universities will continue to study a postgraduate course in Germany. This could help Germany, a country with one of the oldest populations in the world, to address its skill shortages. For Hahn and Lanzendorf (2009, 29), German universities' international presence, among other things, "assures the attraction of highly qualified young scientists (brain-gain policy)[15]".

Certainly, one can argue that people enrol in TNHE in order to realise a pre-existing migration plan. In the Philippines, for example, people who study a nursing degree with a British tertiary education institution normally do so in order to facilitate their emigration (Vincent-Lancrin, 2008). If this is the case in a more widespread context, then claims that TNHE decreases skilled emigration would, it would seem, be incorrect. Furthermore, Lien (2008) notes that, in the absence of TNHE, these graduates would not have had the opportunity to gain a foreign degree and may not have had the opportunity to go abroad.

5.2 The gap in existing literature

This intense speculation around this subject demonstrates the relevance of the topic for policymakers and stakeholders and the interest that it holds from a theoretical point of view for scholars from several disciplines: sociology, macroeconomics, higher education marketing and management, geography, political sciences. Empirical evidence on the uncertain relationship between TNHE and the physical mobility of people is, however, very scarce.

[15] In German: "zudem verspricht man sich ein Einwerben hoch qualifizierten wissenschaftlichen Nachwuchses (*brain gain*-Politik)".

Regarding the linkage between student mobility and TNHE from a macro level perspective, some empirical evidence can be drawn from the official statistics. They suggest that "international student mobility is far from demise" (Brooks and Waters, 2011: 172), rather it has increased in recent decades (OECD, 2014). Furthermore, OECD countries continue to attract the biggest part of international students' flows (OECD, 2014). To the best of my knowledge, Tsiligiris (2014) is the only researcher to have explored the relationship between onshore and offshore enrolment using macro level evidence. In his pioneering study, he considered the UK as a TNHE provider and four Asian countries (Malaysia, Singapore, Hong Kong and China) as TNHE hosts. Looking at TNHE enrolment and international student mobility trends, he finds no evidence for a direct substitution effect, as the outbound mobility from the host countries considered seems to have increased or remained unaffected by the fast growth of British TNHE provision. He concludes that the two modes of export are distinct and attract different kinds of students. The study provided by Tsiligiris is essentially descriptive. Other variables can be related to these trends (e. g. rise of the student population, change in the home country situation and of its relationship with the country of the education provider, etc.), so that the relationship should be further explored.

The remainder of macro level research on student mobility has usually ignored the existence of TNHE, as have macro level studies on skilled migration. In his contribution to a book dealing with skilled migration from a macroeconomic perspective (Boeri et al., 2012), Becker highlighted the relevance of introducing to the macroeconomic debate on international skilled migration the changes experienced by the education sector with particular regard to the spread of TNHE (Becker, 2012). However, no research has until now empirically applied this suggestion. Lien (2008) and Lien and Wang (2012) theoretically modelled and examined the effect of a branch campus on subsequent skilled mobility, finding a different influence depending on the quality of the branch campus. This inspiring work has, however, been conducted through numerical simulations.

Regarding micro level evidence, a certain amount of studies have recently been conducted among TNHE students by higher education marketing and management professionals and scholars (Archer and Brett, 2009; McNamara and Knight, 2014; Pyvis and Chapman, 2005: Wilkins and Huisman, 2011; Wilkins et al., 2012). These studies,

however, have been mainly focused on understanding the reasons why TNHE students choose to study TNHE and not on their attitudes (desire and opportunity) towards migration, approaching this latter issue only marginally.

One of the only existing studies conducted among TNHE students from a sociological perspective has been recently carried out by Waters and Leung (2013), who conducted in-depth interviews among students enrolled in a British franchising programme in Hong Kong. Regarding the interviewees' opportunities to study abroad, the results show that, for many of them, studying overseas was not an option because of financial constraints. The study, however, is, like the studies mentioned above, not focused on migration prospectives, opportunities and desires of these students, rather on their access to social capital in comparison with students attending Hong Kong national institutions.

As has been remarked, the theoretical interest on the topic demonstrated by an intensive intellectual debate is not matched by the existence of empirical evidence, which is still scarce. The goal of this dissertation is to make a step forwards in the addressing this gap and, in this way, provide a contribution to different strands of research.

6. Concluding remarks

The outlined contextual elements and unresolved debates generate a set of reflections which constitutes the cornerstone of this research initiative.

One reflection concerns the need to place the mobility of students and skilled migrants within "transnational social spaces" (Faist, 2000). Transnationalism, however, should not be understood as a fundamental dimension of the migrant's life only after migration has been realised. Rather, there is a need to understand how these transnational social spaces may trigger and/or shape people's mobility (Raghuram, 2013). In this sense, this thesis starts from the assumption that the emergence of TNHE creates new transnational social spaces which are worthy of investigation, as proved by the debates it has generated.

Another reflection concerns the necessity of framing the emergence and spread of TNHE in a wider context which takes into account the broader changes which have transformed the characteristics of higher education worldwide, the important role played

by international organisations and the interests of states in attracting skilled workers. This means that the internationalisation of higher education cannot be considered "as an accidental set of processes" (Robertson and Dale, 2015: 9), but rather should be understood as a set of interventions operated by different agencies which are moved by sometimes different and sometimes similar goals. The acceptance of these "complex and increasingly interrelated dynamics between national policies for trade in education, migration policies and nation building/human capacity building efforts" (Knight, 2006: 57) stimulates an approach which goes beyond reductionism. This means that, from one side, when analysing new trends in higher education, there is a need to overcome educationalism (Dale and Robertson, 2007) by taking into account extra-educational structures, dynamics and rationale, as already highlighted by Verger (2010). From the other side, this means that we have to focus on educational structures, dynamics and rationales when analysing extra-educational issues, such as the international mobility of people. This implies being conscious of the *complexity* which characterises the topic under study and the adoption of an *interdisciplinary approach*. These kinds of considerations mould this research project. In this dissertation, the boundaries between migration and higher education scholarships are continuously traversed when reviewing the literature as well as when looking for possible explanations. In addition, the empirical methods used are drawn from different disciplines depending on the research questions and the challenges presented by data availability.

Some years ago, Vincent-Lancrin (2008) masterly expounded the possible impacts of TNHE on migration. However, at the end of his contribution (p. 114), he stated that it was "premature to undertake an assessment" of this impact. Years have passed from this statement, speculations on the issues have proliferated and TNHE has notably grown. Because of the high relevance of the issue for both developed and developing countries, it is time to deal with this question. Nonetheless, the review of existing research has showed how empirical evidence has been hampered by the lack of available data. This constitutes the main challenge of doing research on this issue. Macro level data on educational enrolment are normally provided by intergovernmental agencies. To date, however, no international organisations have collected data on TNHE enrolment. This dissertation starts from the premise that researchers have to accept the challenges associated with a research desideratum and find ways to overcome the associated

limitations. If not, research will be subordinated to the discretion of those who have the power to produce data. Certainly, the lack of comprehensive and comparable data can undermine or limit the potential for generalisation of some results. Nevertheless, scientific work has to be understood as a collective enterprise which is advanced through modest steps and gradually enriched over space and time. This dissertation wants to make some steps forwards in the understanding of a fairly understudied issue with the aim of encouraging future investigation and with the core intention of encouraging the collection of improved data and the fruitful future cooperation of interdisciplinary research groups.

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CHAPTER 2
TRANSNATIONAL HIGHER EDUCATION AND SKILLED MIGRATION: EVIDENCE FROM AUSTRALIA

Abstract: This paper presents first empirical evidence regarding the relationship between enrolment in transnational higher education (TNHE) and the subsequent skilled migration into the country of the institution which provided educational services. Based on macro level panel data, the analysis shows a close link between skilled immigration and offshore enrolment in Australian higher education within the previous years, suggesting that the provision of higher education offshore can constitute a successful strategy to enlarge skilled migrants' recruitment. The result equally indicates that more caution should be devoted to these kinds of issues by developing countries when opening their educational market to foreign providers.

Keywords: Skilled Migration; Offshore Enrolment; Globalisation of Higher Education; Transnational Education.

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1. Introduction

Skilled migration has been long considered a major issue because of the crucial importance of skilled people for the socioeconomic development of a country. After a period of absence in scholars' and policymakers' agendas, the topic received renewed attention in the nineties, essentially due to developed economies' growing interest in attracting skilled individuals from abroad. For many OECD countries, the continuous ageing of the population causes reason to worry for the sustainability of national welfare systems and has led them to make their immigration systems more skill-selective and to adopt policies in order to actively attract skilled migrants.

In this context, international students are increasingly considered an appreciated source of potential skilled immigrants for the countries where they have studied: they hold recognizable qualifications from familiar educational entities (Kuptsch, 2006) and they are already integrated into the host society, whose language they know and where they have already established social ties. Due to reasons such as these, several OECD countries have eased their immigration policies to allow international students to remain in the host country after having completed their studies, as well as measures to increasingly attract students from abroad. Recent research on student mobility and skilled migration has effectively shown how international students are likely to stay in the country where they studied after having completed their studies (e.g. Dreher and Poutvaara, 2011; Rosenzweig, 2008).

As student mobility often constitutes the first step of future skilled migration, it is relevant to investigate how the new trends in the higher education industry may reshape the current scenario of skilled migration. Several higher education institutions of some OECD countries have indeed started to offer educational services 'offshore' (i.e. in other countries) through the establishment of branch campuses and/or programmes abroad. The main reason to implement transnational higher education (TNHE) in a foreign country is to expand recruitment, reaching people who cannot afford and/or have no interest in emigrating to study. Interestingly, one of the principal motivations for governments opening their educational market to foreign providers' is instead to satisfy the demand for higher education within their country and to retain student outflows and the potential consequent skilled emigration.

There is no consensus on the relationship between enrolment in TNHE and skilled migration. From one side, it has been argued that TNHE enables countries that open their educational markets to foreign providers to retain and attract human capital from other countries (OECD and World Bank, 2007; World Trade Organisation, 2001). From the other, it has also been hypothesised that TNHE might increase the brain drain (Chiang, 2012; Lien and Wang, 2012).

Despite the interest devoted to the phenomenon of skilled migration by policymakers and scholars, the continuous increase of TNHE and the importance of the issue for both developed and developing countries, the relationship between TNHE and skilled migration into the country of the educational services' provider has remained, until now, empirically understudied, due essentially to the scarcity of data available. Using macro level data, this paper aims at filling this gap, exploring the association between enrolment in Australian TNHE and immigration of skilled individuals into Australia.

The consideration of Australia as a destination country constitutes a noteworthy case study because of its interest in recruiting skilled migrants, the strong international character of its higher education system and the diffusion of its TNHE, particularly in Asia, i.e. the continent where TNHE has known the biggest growth.

The remainder of this paper is organised as follows: Section 2 offers a literature review, focused on theories that have tried to explain the drivers of international migration and how previous research has addressed the relationship between student mobility and skilled migration. It also briefly presents the recent discussion on how new trends in higher education could influence the mobility of students and skilled individuals. In section 3 the choice of Australia as a case study is explained. Section 4 and 5 respectively present the methodology and the data used. Section 6 shows the results after having presented some descriptive evidence. It then discusses these results and concludes.

2. Literature Review

2.1 Determinants of international migration

Past research on international migration has put forward several theoretical explanations to understand what drives international migration[16]. The neoclassical migration model mainly conceives international migration as the result of differences in wage between countries (Harris and Todaro, 1970; Todaro, 1976). At a micro level, this theory considers migration as a rational individual decision made to maximise benefits, predicting that before emigrating an individual evaluates costs and potential benefits related to it (Sjaastad, 1962). Costs related to migration are usually calculated based on the geographical distance between countries of origin and destination, colonial links, and linguistic proximity. The neoclassical theory of migration has normally been modelled using the 'push-pull model' and empirically implemented using the gravity equation (Bessey, 2012; Karemera et al., 2000; Mayda, 2005).

The new economics of migration (NELM) theory explains migration as a household strategy to get away from relative deprivation within sending societies (Stark and Taylor, 1989). Both the neoclassical and the NELM theories explain migration as a rational decision taken at a micro level (Massey et al., 1993), a prevalent approach in the empirical literature on skilled migration.

Other theories focus on structural forces that operate at an international level. For example, the segmented labour market theory (Piore, 1979) connects immigration to the developed countries' need for cheap immigrant workers (pull factors/demand side). Piore's theory focuses on low skilled migrants, but it may have inspired some research on skilled migration. Several authors have definitely explained increased skilled migration from the perspective of the demand side, by pointing out changes in immigration policies introduced in main destination countries, which are increasingly selective and favour skilled workers (Abella, 2006; Taran, 2007; Zeugin and Van Dok, 2007). Nevertheless, as noted by Brücker et al. (2012: 170), the favourable admission policies towards skilled workers "may not suffice to attract them".

Another theory that focuses on macro level forces is the world system theory. According to it, international migration flows follow the dynamics of the international

[16] For exhaustive and comprehensive reviews of the theories on the determinants of international migration, see de Haas (2011) and Massey et al. (1993).

market and the structure of the world economy, and are a consequence of neoliberal globalisation. In the framework of this theory, Sassen (1988: 119) states that in order to fully understand what mechanisms explain migration it is necessary to research the ”context of linkages” – the structural and ideological linkages existing between sending and receiving countries and in which way they have been established.

As argued by de Haas (2011) and Massey et al. (1993), different theories of migration can help to give light to the phenomenon of migration from different and complementary perspectives. Indeed, as highlighted by Massey et al. (1993: 433), it is completely conceivable that “individuals act to maximise income, while families minimise risk”. It is also quite reasonable that the need for workers on the demand side influences the choices of potential migrants, although this impact is probably bound to the capability of obtaining information about visas, opportunities, and the job market in destination countries. In this sense, the exploration of Sassen’s “context of linkages” becomes fundamental.

Access to information, which depends on structural forces at a macro level, could be a way to facilitate the realisation of an existing aspiration to go abroad, but it can equally constitute the root of the desire to emigrate. In such a given context, foreign education can be seen as one of the most significant information channels for young people.

2.2 Higher education, student mobility, and skilled migration

The degradation of higher education systems in many developing countries has been identified as one of the main 'push factors' causing people to emigrate for education abroad (Agarwal and Winkler, 1985; Mazzarol and Soutar, 2002; McMahon, 1992).

Literature on the brain drain phenomenon furthermore often points out that skilled emigration leads to the worsening of welfare and public services in origin countries; this is especially worrying for the sustainability of their health and education sectors. Hence, as argued by Docquier and Rapoport (2012), the global competition for talent could weaken the capacity of sending countries to invest in public education. Literature on skilled migration as a brain gain instead focuses on the potential positive impacts of migration prospects in promoting individuals’ skill acquisition in the origin country, thus fostering human capital accumulation (Beine et al., 2011; Vidal, 1998).

Recent research has shown how the seed of skilled emigration lies often in international student mobility, highlighting how international students are highly likely to stay in the host country to work after having completed their studies there (Rosenzweig, 2008; Tremblay, 2001). Dreher and Poutvaara (2011) showed how the number of foreign students studying in the US is a good predictor of skilled immigration, whereas Felbermayr and Reczkowski (2012) determined an average ex-international students' retention rate of about 70%. This seems to be due to the fact that a foreign education increases the probability of finding a job in the training countries (Rosenzweig, 2005). It is however unclear if young people decide to study abroad to facilitate their desire to emigrate (which precedes the decision to study abroad) or if the decision not to return is mainly due to circumstances that occur during or after the period of study abroad. According to Coulon and Paivandi (2003: 45), international students often leave their home country with a "residential strategy"; they study abroad in order to stay there afterwards. Although it is quite obvious that a strong link exists between the educational decision-making and employment purposes (Hashim, 2007), some scholars have connected the non-return of ex-international students with the effect of the so-called 'second acculturation' or 're-entry transition'; i.e. the difficulties that many ex-international students experience when readapting to their home culture after having lived a long period abroad (Arthur, 2003; Viguier, 1966; 1968). The decision to stay abroad can be however also sometimes connected to the fact that the training received in the host country is not adapted to the needs of the home country labour market.

2.3 TNHE and skilled migration: the need for empirical evidence

As recently underlined by Becker (2012), with regards to student mobility as directly related to skilled migration, it is interesting to introduce into the academic debate on these topics a reflection on how and if TNHE is related to skilled mobility. Due to the difficulty in finding harmonised and comparable data, the whole question has been empirically neglected. Hence, until now, the discussion has essentially remained speculative.

If we look at the perspective of countries that have opened their market to foreign countries' institutions, they mainly "aim at satisfying the demand for higher education

that was not being met by local existing providers" (Wilkins and Huisman, 2011: 300-301) and to enhance their higher education system's quality. In doing so, they can reduce skilled emigration and themselves become a destination country for international students from abroad (Wilkins and Huisman, 2011; Zhang, 2003). Theoretically, it has been argued that TNHE enables countries to foster the quality of education institutions through a greater competition, a broader supply and the internationalisation of curricula, furthermore creating new job opportunities and a more stimulating academic milieu (Bashir, 2007; Kapur and Crowley, 2008). This will permit countries to retain and attract human capital (OECD and World Bank, 2007; World Trade Organisation, 2001). It has also been hypothesised that TNHE may contribute to the retention of home country students, who would have otherwise gone overseas and spent "money there", constituting a "less-worse option" for countries of origin compared to students' emigration (Kapur and Crowley, 2008, 30). Larsen and Vincent-Lancrin (2002) argue that the increase of TNHE may reduce the risk of a brain drain because students will be able to study without having to go abroad. If for many international students a reason for not returning is the problematic re-adaptation to their home culture after a period abroad (Viguier, 1966; 1968), the possibility to study in an international institution in the home country may diminish the permanent emigration of tertiary educated people, therefore helping countries to retain their human resources (Vincent-Lancrin, 2005). This kind of position essentially views TNHE as a way to retain students in the home country during and after their studies. They also seem to assume that international mobile students and transnational students mainly constitute the same segment of clientele and that studying in the framework of TNHE does not involve future emigration. In their article focused on describing the context of student mobility and skilled migration in Malaysia and Australia, Ziguras and Law (2006) note that people who received their degrees from Australian education institutions offshore appear to migrate less into Australia and receive less points in the admission's system than those who studied directly in Australia.

The perspective of higher education institutions from developed countries opening campuses and programmes offshore is interestingly different. They view TNHE as a way to enlarge their clientele (Ziguras, 2008), reaching people who do not have the aspiration and/or capability to study abroad. The International Education Advisory

Council, an agency established by the Australian government, discusses the issue of international education in a 2012 discussion paper, stating the following:

> TNHE offers students who are **unable** or **unwilling** to acquire their qualification in Australia access to a more diverse range of quality programmes than those available in their home country, including the opportunity to undertake tuition in English (International Education Advisory Council 2012: 19; emphasis mine).

If TNHE is expanding international student recruitment, then claims that TNHE is a good way to retain potential international students in the home country fail, meaning that the spread of TNHE exposes more people to a foreign education experience. Stein et al. (1996) remark how the participation in international education and training stimulates the interest of young people to work abroad. Chiang (2012) argues that TNHE could constitute a "Trojan Horse" that might aggravate the brain drain, and furthermore increase the influence of Western culture on East-Asia. Lien and Wang (2012) provide an analytical model to examine the effects of the presence of a foreign branch campus on the social welfare of the host country. According to their research, more students will end up immigrating into the foreign country, deepening the brain drain problem. Due to the scarcity of actual data, the two scholars were not able to test their assumptions and conclusions, which rely upon numerical simulations. It must also be pointed out that TNHE programmes often entail stay periods in the country of the educational institutions. In a survey-based study on students who had participated in exchange programmes, King and Ruiz-Gelices (2003) highlight how just a "year abroad" has effects in subsequent migration behaviour: they found that people who experienced the "year abroad" are almost twice as likely to have migrated abroad and three times as likely to be current residents in a foreign country. According to Venturini (2012: 304), through their foreign student programmes, the US, Canada, Australia and the UK generate educated workers that are somewhat connected (at least through knowledge of the language), to the country where they have studied. This, combined with their skill-selective immigration policies, increases skilled immigration. It is undeniable that TNHE somehow connects people with the country of the higher education institutions attended. Additionally, through transnational provision, qualifications become international and that increases the capability of their holders to move (Vincent-Lancrin, 2008). This kind of position assumes that TNHE is expanding recruitment and that the participation in foreign education is related to skilled mobility.

They therefore hypothesise that an increase in TNHE corresponds to an increase of skilled immigration to the country of the institution which provided educational services offshore.

As outlined by the above, the debate on TNHE and its association with skilled mobility is characterised by the existence of many different arguments which rely upon heterogeneous assumptions and by a scarcity of empirical evidence. This paper constitutes one of the first attempts to provide an empirical analysis of the relationship between enrolment in offshore education and skilled migration into the country of the education provider.

3. Case Selection

Data on enrolment in TNHE are exclusively available on an aggregated level. Only two countries, the UK and Australia, systematically collect data on students enrolled in TNHE within their institutions operating offshore. Nevertheless, the differences between the measurements and the variables in the two datasets prevent a comparison of them. UK data, provided by the Higher Education Statistics Agency (HESA), makes a distinction between enrolment in programmes delivered in the framework of a partnership (franchising, twinning arrangement, etc.) and enrolment in UK branch campuses. This distinction is not made by Australian data, provided by the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE)[17] of the Australian Government. Moreover, Australian data give information about enrolment by country of birth, whereas UK data only tell us how many people are studying in every country without reference to the country of origin of students. Australian data are thus preferable because they allow us to evaluate the impact of factors associated with the country of origin of the students. Furthermore, they cover a longer period of time, available from 2002, whereas UK data have only been collected from 2007.

The case of Australia is remarkable for the aims of this paper. Together with Canada and New Zealand, Australia can be considered a pioneer in the selection of migrants. It is also among the six main destination countries of skilled migrants. Moreover, the Australian higher education sector has one of the most internationalised enrolment in

[17] Since August-September 2013, Higher education section moved from DIIRSTE to the Department of Education in line with the Australia's machinery of government (MOG) changes.

the world (Hall and Hooper, 2008; Nelson, 2003: 35; OECD, 2004; 2009). Australian universities have known in the recent decades an unprecedented growth of international student enrolment, especially in offshore programmes (IDP Education Australia, 2002). Offshore enrolment in Australian universities has more than tripled from 1996 to 2008, constituting approximately one-third of the total of international enrolment in Australian universities in 2008 (IDP Education Australia, 2008). Finally, the presence of Australian TNHE is particularly important in Asia, i.e. the continent with the biggest supply of TNHE.

4. Methodology

Inspired by previous research (Bessey, 2012; Docquier and Rapoport, 2012; Karemera et al., 2000; Lewer and Van den Berg, 2008; Mayda, 2005), skilled migration from one country of origin (*i*) to Australia in a year (*t*) is modelled here as function of several variables, which aim at controlling for economic, demographic, legal and institutional factors which may affect the volume of skilled migration.

Considering the recent developments in econometric literature (Santos Silva and Tenreyro, 2006; 2011), the relationship of interest is estimated using a multiplicative model, using the Poisson pseudo-maximum-likelihood (PPML) estimation technique, a model derived from count data analysis[18]. This estimator was recently proposed to overcome the methodological challenges connected with the logarithmic specification, which has longer represented the standard approach in the analysis of trade and migration flows. One of the biggest complications related to the logarithmic specification is the fact that it cannot deal with zeros because the logarithm of zero in undefined. Thus, the observations with zero values are dropped and omitted from the calculations. In trade and migration flows, the dependent variable is zero for a large number of observations. Omitting them can be considered a loss of important information and a source of selection bias due to the fact that zero values are not randomly distributed (Burger et al., 2009; Eichengreen and Irwin, 1998). As pointed out by Santos Silva and Tenreyro (2006), the PPML estimator constitutes a solution for the problem of the presence of zero values in the dependent variable because the dependent variable in this model does not enter in log. Another challenging aspect of the

[18] For a detailed presentation of the PPML estimator, see the "The Log of gravity" page by Santos Silva and Tenreyro: http://privatewww.essex.ac.uk/~jmcss/LGW.html (last accessed July 25, 2014).

logarithmic specification is related to the assumption made on homoscedasticity, i.e. the assumption that the error terms all have the same variance. Through a set of Monte Carlo simulations, Santos Silva and Tenreyro (2006: 641) demonstrate that the PPML estimator is "robust to the different patterns of heteroscedasticity". Furthermore, it has been found to give consistent results even when the distribution is not rigorously Poisson, and is used more frequently in the literature (Beine et al., 2011; Beine and Parsons, 2013; Bessey, 2012).

Hence, following Wooldridge (1999), a panel data analysis is conducted for estimating a fixed-effects (FE) Poisson pseudo-maximum likelihood regression with clustered robust standard errors. The basis of the empirical analysis is represented by equation [1] below:

$$skillimm_{it} = \exp\left[\beta_0 + \beta_1 \ln(Offshoreenrol_{it-\tau}) + \beta_2 \ln(GDPper\ capita_{it}) + \beta_3 \ln(Demog_{it}) + \beta_4 (Bilagree_{it}) + \beta_5 \ln(Unempl_{it} + \alpha_i + \gamma_t\right] + \varepsilon_{it} \quad [1]$$

Skilled immigration into Australia ($skillimm_{it}$), is defined as the number of people from country *i* who are granted an Australian skilled migration visa offshore. Counting only visas granted offshore can be considered a reasonably accurate measure of skilled immigration because it excludes from the estimations ex-international students already living in Australia who change status from a student visa to a skilled migrant visa onshore[19]. In this way, it is assured that the individuals counted are already 'skilled' before entry into Australia and they were not living there in the period that precedes the grant of the visa[20].

The main variable of interest is $Offshoreenrol_{it-\tau}$, which measures the stock of students from country *i* enrolled in Australian offshore higher education at a period of time sufficiently far from *t* in the past ($t - \tau$) so that the current stock of students in *t* is not accounted for in the stock of skilled immigrants. From the total enrolment, the data used permits the exclusion of first year students, because it is unlikely that they are

[19] As the Australian Bureau of Statistics (2009) indicates, a very high proportion of onshore skilled visa applicants (45% in the period 1997/98-2007/08) are ex-international students.

[20] It is possible that the measure includes ex-foreign students that have come back to their country of origin and immigrate back to Australia for a second time. Nevertheless, as underlined by the Australian Bureau of Statistics (2009), skilled arrivals are normally quite young (within the decade of 1997/98-2007/08, 57% of arrivals were aged 29 years old and under); this suggests the improbability of this migration pattern.

eligible for a visa based on qualifications after only one year of commencing their studies. Actually, higher education can be considered the process through which skills are acquired and a time (at least two or three years) must elapse so that the observed values of this explanatory variable can result in a change in the dependent variable. It is fundamental to remark that the main explanatory variable of interest is not the presence of TNHE in one country (which surely is not random), but rather the stock of people from whichever country (also from countries where no Australian TNHE is available) enrolled in Australian TNHE. More and more people are indeed enrolled in TNHE in countries other than their own. Consequently, the analysis conducted includes also countries where no Australian TNHE is available.

The model contains the following controls. Following the macro migration literature (Dreher and Poutvaara, 2011; Hatton, 1995; Pedersen et al., 2008), $GDPper\ capita_{it}$ is added. The stock of potential skilled emigrants ($Demog_{it}$) is approximated by a variable which controls for the total number of people enrolled in tertiary education. This measure can surely be considered quite a truthful way to control the stock of potential skilled immigrants into Australia, who are usually fairly young, especially for the categories of skilled visas considered here. In fact, Australian immigration policies clearly favour the entrance of immigrants in their twenties and early thirties.

One of the originalities of the model is the introduction of the variable $Bilagree_{it}$ which accounts for the existence of bilateral agreements which can foster or facilitate the mobility of workers. Specifically, the variable controls for the existence of Social Security Agreements between countries of origin and Australia. Under these agreements, residents of Australia and of countries that stipulate them will be able to move from one signing country to another with the knowledge that their right to social benefits is recognised in both countries. The relevance of Social Security Agreements that allow the portability of social security's rights in affecting cross-border workers' mobility has been highlighted in the literature (Bertoli et al., 2013; Bertoli and Fernández-Huertas Moraga, 2013; Pasadilla, 2011). This kind of opportunity favours a more positive attitude of people towards labour migration into a particular country. It is thus expected that the introduction of an agreement of such type is positively related with workers' mobility. Indubitably, it is equally important to control for the presence of agreements which easily enable overseas educational qualifications to be recognised.

In Australia there is no single authority that assesses or recognises all overseas qualifications. However, Australia has signed agreements of mutual recognition of qualifications with some countries. All the agreements of this kind have been signed prior to 2003, the starting year of the analyses. Thus, their effect is constant over the whole period considered. Hence, origin countries' fixed effects control for this.

As Docquier and Rapoport (2012) note, some skilled individuals emigrate because they would not find a job or would be ineffectively employed in their countries of origin. A further control which measures the unemployment rate will be therefore included, because unemployment has usually been considered in the literature as one of the main macroeconomic determinants of migration (Harris and Todaro, 1970; Hatton, 1995; Van Hear et al., 2012). The introduction of this variable causes many observations to be dropped because of many missing values; therefore it will be considered at a later point in the analysis.

α_i is a country specific intercept (origin country's fixed effects). Countries of origin are quite different from one another, therefore it is fundamental to consider the existence of differences in the analytic model[21]. The use of countries' fixed effects controls for time-invariant characteristics related with culture, climate, geography and other factors relevant for migration patterns. As I consider only one country of destination, α_i also captures country-specific economic, historical and cultural links with Australia, such as the same commonwealth membership, common language and geographical distance. Thus, the use of these kinds of fixed effects makes it possible to account for all the time-invariant characteristics of one country of origin which can influence both the number of students enrolled in Australian TNHE and the number of people immigrating as skilled migrants into Australia. The influential time-invariant factors might also include the Australian recognition of degrees from a particular country, a particularly friendly attitude of Australia towards skilled immigrants from a

[21] It would be worthwhile to have the possibility to add a variable to control origin countries' TNHE policies. To my knowledge, any dataset is available where such information is available for every country in the world. It should however be pointed out that where Australian TNHE is more present (e. g.: Singapore, Malaysia), this phenomenon had begun and was promoted before the period considered in these analyses, so that countries' fixed effects may control for this issue in a reasonable manner.

specific country [22] and other time-invariant unobserved factors. Thus, the use of countries of origin's fixed effects controls for the so-called "unobserved heterogeneity".

The equation also includes γ_t that controls for time specificity (time fixed effects) which are common for all countries, but differs from one year to another. This is quite important given the data cycle taken into consideration for this research. The time span considered actually includes the so-called 'Great Recession', i.e. the global economic downturn. The inclusion of time fixed effects allows the equation to control for its influence. As the analysis concerns only one country of destination, time fixed effects also control for changes in Australian immigration policies, such as, for example, changes in the total number of skilled workers admitted into the country.

Finally, I also provide the results of the estimations given by equation [2], because in the literature on international migration, this approach has longer represented the standard way of estimation:

$$\ln(skillimm_{it}) = \beta_0 + \beta_1 \ln(Offshoreenrol_{it-\tau}) + \beta_2 \ln(GDPper\ capita_{it}) + \beta_3 \ln(Demog_{it}) + \beta_4(Bilagree_{it}) + \beta_5 \ln(Unempl_{it}) + \alpha_i + \gamma_t + \varepsilon_{it} \quad [2]$$

However, it is important to reiterate how recent research by Santos Silva and Tenreyro (2006; 2011) raises concerns about this specification due to the logarithmic transformation of the dependent variable, the way zero values are treated and the assumption of homoscedasticity.

5. Data

The panel used in this research covers a 10-year period (2002-2011). From the countries of origin in the dataset, I explicitly exclude New Zealand, because this country and Australia have had special arrangements in place since the twenties to facilitate a free flow of people between them. In this way, New Zealand citizens are not counted in the data on visas granted.

[22] It can be assumed that, for the time period considered in this analysis, fixed effects also control for the stock of previous migrants in a reasonable way. In fact, as recently remarked by Beine et al. (2013: 26), "at the annual frequency, migration stocks are quite stable over time". Besides, I control for the existence of bilateral agreements, which is likely to be correlated with the migration stocks in Australia, as highlighted by Beine et al. (2013). So that part of the effect associated to the 'migrants networks' is controlled for by that variable.

Data on skilled immigration to Australia are provided by the Australian Department of Immigration and Citizenship (DIAC) and concern all skilled visas granted offshore[23]. Skilled immigrants can enter Australia through two different schemes: the *General Skilled Migration* (GSM) scheme and the *Employer Nomination* (ENS) scheme. Both include a wide range of permanent and temporary visa subclasses to be granted to individuals with an educational degree. The other two small categories of skilled visa (*Business Skilled Visa* and *Distinguished Talent Visa*) are explicitly excluded from the estimations because they are granted to particular categories of individuals and do not necessarily require any tertiary education.

Data on offshore and onshore enrolment in Australian higher education institutions have been provided for each country of origin of the students by the Australian DIIRSTE. Enrolment in non-award courses, i.e. courses which do not lead to a qualification, is explicitly excluded. Courses that are offered from within Australia through distance education are not considered to be offshore courses.

Concerning the other variables, I take data on GDP per capita and on unemployment rates from the World Bank Development Indicators. Information on tertiary enrolment is taken from the UNESCO/UIS database. The variable that controls for bilateral agreement is a dummy variable (= 1) if there is a bilateral Social Security Agreement between the country of origin and Australia. Information comes from the Australian Treaties Database (ATD) of the Department of Foreign Affairs and Trade of the Australian Government. All variables, their precise definition and data sources are shown in table 1.

(TABLE 1 HERE)

[23] Data on visa granted offshore are collected by country of citizenship whereas the main independent variable is collected by country of origin. An alternative to using data on visas would be to use Census data. However, this is also far from perfect because "the information about entry year is often based on answers to an ambiguous question" (Rosenzweig, 2005, 9). From DIAC it is possible to get data on skilled visas granted by country of birth for the considered period. Nonetheless, the information by country of birth concerns the total number of visas conceded (offshore and onshore). I compared the two datasets (by country of birth and by country of citizenship), and the correlation between the total number of skilled visas granted by country of birth and citizenship is remarkably high (0.9441), demonstrating that the use of the information on skilled visas granted offshore by country of citizenship is not problematic. The information available gives the number of skilled visas granted from June of one year to June of the following one.

6. Results

6.1 Descriptive Analysis

The annual inflow of skilled migrants into Australia has notably increased during the last years. The total number of skilled visas granted (both offshore and onshore) has nearly doubled from 2002/2003 to 2011/2012 (figure 1).

(FIGURE 1 HERE)

In ten years, only 16 countries of origin of skilled migrants are present in the top-ten lists, suggesting a high impact of time-invariant characteristics in shaping skilled migration flows. This confirms that an analysis on changes within countries is more pertinent than an analysis of differences between countries.

Checking if the increase in offshore enrolment corresponds to a decrease in onshore enrolment is noteworthy. As figure 2 shows, in the period considered, both offshore and onshore enrolment in Australian institutions grew.

(FIGURE 2 HERE)

Figure 3 shows the geographical distribution of offshore enrolment in Australian higher education in 2002 by country of birth. In that year, students enrolled in Australian TNHE are mainly from Asia, most likely enrolled directly in their countries of origin.

(FIGURE 3 HERE)

The total enrolment in Australian TNHE grew from 50.428 enrolments in 2002 to 80.962 in 2011. Figure 4 shows the geographical distribution of offshore enrolment in Australian higher education by country of birth in 2011. Asia remains the continent with the most enrolment by country of birth, but the number of students from Africa, Middle East and North America became larger.

Comparing this map with that for 2002, it is possible to remark how the number of countries with more than 1 000 students enrolled offshore in Australian higher education considerably increased and how the origin's composition of students enrolled became more varied in the period considered. If from one side this reflects the enlargement of the presence of Australian TNHE worldwide, then the number of

students coming from countries where no Australian TNHE is available is similarly growing. Enrolment does not exclusively concern people coming from countries where Australian higher education is offered.

(FIGURE 4 HERE)

If the majority of people enrol in their countries of origin, the share of people enrolled in a country other than their country of origin is increasing as well. TNHE seems to entail new patterns of student mobility towards countries where the opportunity to study TNHE is available. TNHE can actually constitute a less costly type of student migration for people who do not have the possibility to study directly in Australia.

The descriptive statistics of all the variables included in the analyses is provided in table 2.

(TABLE 2 HERE)

6.2 Panel Data Analysis

This section presents a panel data analysis focused on the relationship between skilled immigration into Australia and enrolment in Australian TNHE one and two years before.

Tables 3 presents the results obtained using the PPML estimator. In the first two columns, only one lag of the main independent variable is added, whereas columns 3 and 4 presents the results obtained with the introduction of two lagged values of the independent variable of main interest. The introduction of the variable controlling for the stock of students enrolled in Australian TNHE in *t-2* implies the drop of many observations, thus the results concern two different subsamples and are therefore not totally comparable.

(TABLE 3 HERE)

Columns 2 and 4 show the results of an augmented version of the equation estimated in columns 1 and 3, adding a variable controlling for the presence of Social Security bilateral Agreements.

The stock of students enrolled in Australian higher education in previous years is found to have a positive and significant association with subsequent skilled immigration

into Australia in all the estimations. Although the dependent variable here is specified as the total number of skilled visas granted offshore (and not as a logarithm), the coefficients of the independent variables entered into logarithms (such as the variable of my interest) can still be interpreted as elasticities. The results in columns 1 and 2 show that a 10% increase in the number of enrolments in Australian TNHE from individuals from country *i* at time *t-1* is associated with a positive increase (between 1.5% and 1.6%) in the skilled visas granted to individuals from the same country to enter Australia in the subsequent year.

As expected, the introduction of social security bilateral agreements is positively related with skilled migration with a statistically significant coefficient. The variable that controls for GDP per capita seems also to be positively associated with the dependent variable. The result suggests that outmigration increases with the income per capita in the origin countries. This is quite understandable as the level of wealth in one country influences both the capability of people to acquire skills and to afford emigration. The result is however not significant. The number of people enrolled in tertiary education, introduced as a proxy of the stock of young skilled individuals in the country, is positively related with skilled migration[24].

(TABLE 4 HERE)

I further test for the robustness of the results with respect to the inclusion of an additional variable which controls for the rate of unemployment in the country of origin. An increase in the unemployment rate in one country is likely to be related to more migration. The results obtained with the introduction of this additional variable with the PPML estimator are shown in table 4.

An increase in the rates of unemployment in the country of origin is significantly associated with a growth in skilled migration. Most surprisingly, the inclusion of this variable has no impact on the sign of the relationship between enrolment in Australian TNHE and subsequent skilled immigration into Australia; rather, indeed the coefficients here are quantitatively higher and statistically more significant.

[24] I also estimated the model substituting this variable with the stock of educated people and the results are very similar. Data on stocks of educated people come from the dataset by Barro and Lee (2010) on educational attainment for members of the population aged 15 and over. The dataset provides information only every 5 years, thus the values for the remaining years have been linearly interpolated. The variable on tertiary enrolment is here preferred because their use requires less interpolation.

(TABLE 5 HERE)

I also provide the results of the logarithmic specification. As explained above, this approach has longer represented the standard way of dealing with international migration macro analyses. I run two set of regressions with the inclusion of country and time dummies and calculating clustered robust standard errors. The dependent variable is the natural logarithm of total offshore visas granted in the first set of regressions (tables 5; columns 7 & 8) and of total offshore visas granted +1, as a common way to deal with zero values on the dependent variable, in the second one (tables 5; columns 9 & 10).

The results of the logarithmic specification broadly confirm the findings of the PPML for the independent variable of interest. The positive relationship found between enrolment in Australian TNHE and subsequent skilled immigration to Australia seems to be robust throughout the different estimations presented.

7. Discussion and concluding remarks

This paper analyses the relationship between enrolment in TNHE and migration of skilled individuals. Using aggregated panel data from Australia, the analysis has been pursued by estimating an 'augmented version[25]' of the gravity equation following previous literature on international labour migration.

Several scholars have theoretically speculated on the nature and sign of the relationship of interest, but no empirical analysis has been ever conducted until now because of the scarcity of data. The theoretical debate on the topic has been divided into two main positions. From one side, it has been claimed that enrolment in TNHE constitutes a substitute for student mobility and can therefore lower the outflows of skilled individuals that result from this phenomenon assuming that people studying in the framework of TNHE do no migrate into the country of the education provider afterwards. From the other, it has also been argued that TNHE acts as a magnet for more people to be attracted into the country of the education provider after having completed the degree. The results of this analysis are more in line with this second position. They show a positive and statistically significant association between skilled immigration into

[25] In econometrics, a gravity equation is defined as 'augmented' when variables are added into the model to test whether they are relevant in explaining the dependent variable.

Australia and offshore enrolment in Australian higher education in the previous years. In order to better explore the relationship found, the explanatory variable "enrolment in Australia TNHE" was taken into account at a period of time prior to that of the dependent variable so that its changes can result in changes of the dependent variable (the students have to finish their studies before to be able to enter into Australia as skilled migrants). Furthermore, the factors which can influence skilled migration (population size, GDP per capita, unemployment, social rights portability) were introduced into the analysis as suggested by previous research. The panel structure of the dataset used enabled the employment of a full set of fixed effects. This makes possible to account for all the time-invariant characteristics of one country of origin which can motivate both the facts to have enrolment in Australian TNHE and skilled migration into Australia. These include, for example, distance, historical and economic strong relationships with Australia, the Australian recognition of degrees from a particular country, a particular friendly attitude of Australia towards skilled immigrants from a specific country, and other possible unobserved factors. From the other side, time fixed effects control for the specificity of a particular year, taking into account, for example, the global economic situation. As the analysis exclusively concerns migration into one country (Australia), this particular type of fixed effects also controls for Australian changes in immigration policies and regulations towards skilled migrants.

The results obtained indicate that an increase in enrolment in Australian TNHE is associated with an increase of skilled migration into Australia in the following years. This could be due to the fact that TNHE facilitates the creation of links and ties with people from the country of the education provider, furthermore permitting an easier access to information about its job market and legal framework. The educational institution may also directly provide links with employers. According to a paper by Bagchi (2001) examining skilled migration into the United States, skilled peoples' weak ties, with particular regards to potential employers, play a key role in explaining their migration, even more than contact with relatives and friends abroad. Moreover, the qualifications obtained through TNHE are recognised in the higher education provider's country and this could pave the way to future migration. Certainly, one may argue that people enrol in TNHE in order to realise a previous desire to immigrate into the country of the education provider, constituting an intermediate step towards the realisation of an

emigration. Even if this is the case, claims regarding which TNHE is a good way to retain the potential skilled emigration resulting from student mobility seem misleading. Indeed, even if TNHE is a substitute for student mobility, the results of this analysis suggest that a large proportion of people who enrolled in TNHE tend to immigrate into the country of the education provider. In this case, enrolment in TNHE is merely delaying the emigration. All this should be seriously taken in consideration by those countries which open their educational market to foreign providers with the hope of retaining skilled migration outflows and/or to self-attract skilled individuals from abroad. Concerning this last point, the relationship found suggests that, even if they manage to attract foreign students, it is predictable that after pursuing the degree in the third country, they will end up immigrating to the country of the education provider. Certainly, further research is needed to corroborate these findings, especially considering other national settings and longer periods of time. Future inquiry should also be directed towards testing and identifying the truly causal nature of the relationship found here.

A number of questions on the possible mechanisms at work remain. It is possible that some students who obtain undergraduate education offshore may then move to Australia to attend postgraduate programmes onshore. This additional possible mechanism at stake could not have been taken into account in the present paper due to the unavailability of data. Future research should consider this additional way of ex-TNHE students to immigrate into Australia which could mean a bigger effect of enrolment in TNHE in future skilled migration flows. Further research is similarly needed in order to analyse the relationship between enrolment in TNHE and the mobility of students, and to better understand who the students enrolling in TNHE are and what motivations and aspirations they have. It seems hence necessary, and relevant, to build micro level surveys focused especially on the comparison between students enrolled offshore and traditional mobile students in order to understand their characteristics, motivations and attitudes towards migration. A study by Pyvis and Chapman (2007) has also recently shown how the motivations of students enrolled offshore in their own country and those enrolled offshore in a third country can be very different. Moreover, in this paper, the focus is TNHE, but future research may want to consider also transnational vocational education and training (VET).

Within the limits of a macro level approach, the results concerning the positive association between enrolment in TNHE and skilled migration into Australia, taking into account only those individuals who were granted visas outside the country, have a reasonable magnitude and are quite reliable throughout different estimation techniques. Additionally, the quality of Australian data allowed for the measuring of skilled immigration in an accurate way, excluding migrants' children and ex-international students who stay in Australia after having completed their studies, thus changing visa-type (to a skilled migrant visa) directly onshore. Moreover, compared with Census information, normally used in research on skilled migration, data on visas granted assures more certainty regarding the year of entry of the individuals counted.

Of course, this research is not exempt of shortcomings, mainly due to the remarkable scarcity of data available. First of all, data on offshore enrolment are available only from 2002, so the time length considered for the analyses cannot be longer. Likewise, even though the case of Australia as a receiving country is highly relevant, the consideration of only one case as a destination country prevents generalisations to be made. Still, if we compare the official strategies towards student mobility's policies and TNHE of the major TNHE exporting countries (for instance, US, UK and Australia), we can remark how they have reasonably similar goals and rationale[26]. This could suggest similar outcomes. As a major exporting country, Australia is unique in providing data on students enrolled in its higher education offshore based on their country of birth. If more data will be produced in other national settings in the future, it would be useful to test the results of this study with other countries that are very active in offshoring their higher education. Besides, the consideration of an English-speaking country as a country of destination does not allow for the disentangling of a further important issue related to the phenomenon of TNHE: i.e. the role language plays in the decision-making of students and of future skilled migrants. It is a fact that TNHE has been almost exclusively Anglophone to date and studying in English is perhaps one of the attractions of enrolling in it. This is a reason why it is not yet feasible to disentangle the role language has in such dynamics. This surely constitutes a valuable avenue for future research, especially considering the recent growing interest of non-English speaking

[26] Such similarities are easy to find by comparing, for example, the UK's government strategy report (HM Government, 2013) with the discussion paper elaborated by the Australian International Education Advisory Council (2012).

countries, such as Germany and France, in offshoring their higher education abroad, often through the implementation of programmes in English but with the firm goal of promoting their national languages as well.

This study can be considered a first step in the exploration of an issue of particular importance for both developed and developing countries. The introduction of a variable measuring enrolment in TNHE into the debate on skilled migration makes this study unique and hopefully it will inspire future research and the gathering of improved data on this issue.

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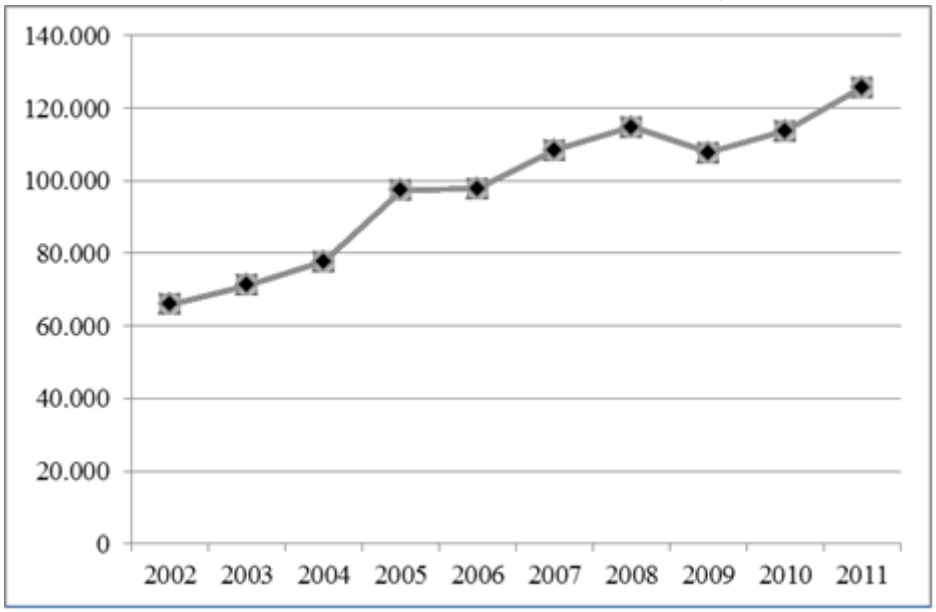
9. Appendix: Tables and Figures

TABLE 1: List of variables

Variable	Source	Definition
Total offshore skilled visa	Australian Department of Immigration and Citizenship, December 2012	Total offshore visas granted through the skilled migration stream (Skilled Independent, Employer Sponsored, State Sponsored and Skilled Australian Sponsored by country of citizenship. It excludes Business Skilled and Distinguished Talent Visas). Observations with no clear identification of the country are dropped. In the original dataset, counts less than 5 (from 1 to 4) are indicated as < 5. This is why these counts are substituted with 3.
Total offshore enrolment	Selected Higher Education Statistics, Department of Industry, Innovation, Science, Research and Tertiary Education (Australia)	Total number of students enrolled in Australian higher education institutions and/or programmes offshore by country of birth, excluding first-year students, in *t-1* and in *t-2*). Dependent territories are considered jointly with the controlling state. Observations with no clear identification of the country are dropped. In the original dataset, counts less than 5 (from 1 to 4) are indicated as < 5. This is why these counts are substituted with 3.
GDP per capita	World Bank World Development Indicators.	Gross domestic product divided by midyear population. Data are in constant U.S. dollars.
Enrolment in tertiary education	UNESCO/UIS	Stock of people enrolled in total tertiary education. Missing values are linearly interpolated.
Unemployment	World Bank	Unemployment refers to the share of the labour force that is without work but available for and seeking employment. Definitions of labour force and unemployment can differ by country.
Bilateral agreement	Australian Treaties Database (ATD) of the Department of Foreign Affairs and Trade of the Australian Government	Dummy variable = 1 if there is a bilateral Social Security Agreement between the country of origin and Australia.

FIGURE 1: Total Number of Skilled Visa Grants, Australia (2002/03 to 2011/12)



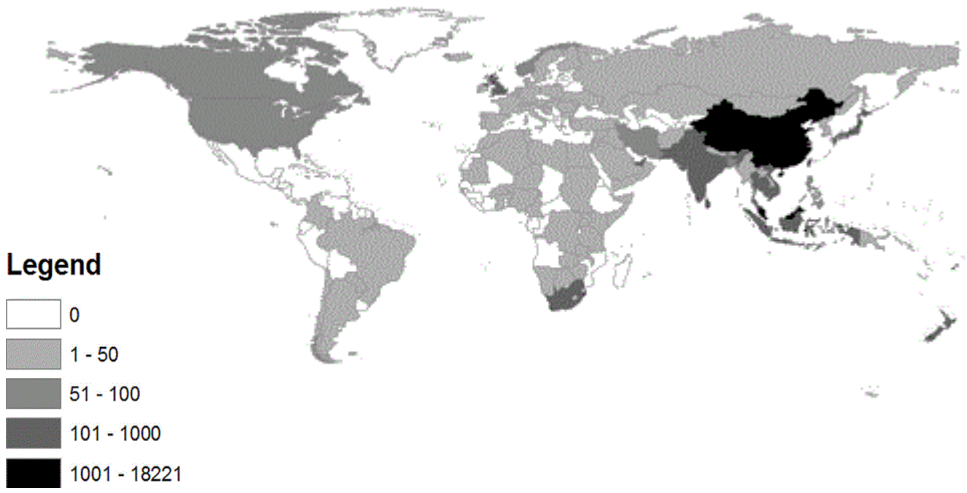
Source: Author. Data from DIAC, December 2012.

FIGURE 2: Enrolment in Australian higher education, 2002-2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	% Growth 2002-11
Offshore	50428	57034	64864	66347	66476	68453	68843	73846	76892	80962	**60.55%**
Onshore	844880	872820	880030	892688	914081	956997	992986	1056701	1114794	1139830	**34,91%**

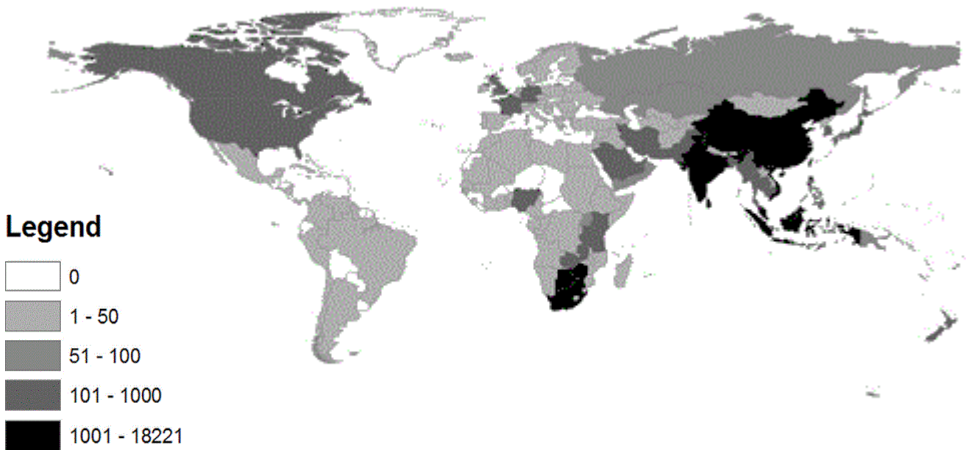
Note: It includes enrolment of students born in Australia.
Source: Author. Data from Selected Higher Education Statistics, Australian DIISRTE.

FIGURE 3: Total enrolment in Australian TNHE by country of birth, 2002



Data source: Author. Data from Selected Higher Education Statistics, Australia DIISRTE.

FIGURE 4: Total enrolment in Australian TNHE by country of birth, 2011



Data source: Author. Data from Selected Higher Education Statistics, Australia DIISRTE.

TABLE 2: Descriptive Statistics

Variable	Min.	Max	Mean	Std. Dev. (overall)	N. Obs.
Total offshore skilled visa	0	19934	211.0314	1163.696	2450
Log of total offshore skilled visa	1.098612	9.900182	3.674214	2.009216	1250
Log of total offshore skilled visa +1	0	9.900232	1.915321	2.330401	2450
Log of total offshore enrolment, t-1	0	9.378817	2.783036	2.008	1076
Log of total offshore enrolment, t-2	0	9.333973	2.755733	2.001477	947
Log of GDP per capita	4.652165	12.13481	8.254849	1.651877	1918
Log of enrolment in tertiary education	.6931472	17.2594	11.52491	2.422913	1489
Log of unemployment	-2.302585	4.085976	1.9786	.689847	1037
Bilateral agreement	0	1	.0469388	.2115509	2450

TABLE 3: Skilled migration into Australia (2002-2011), PPML specification

	(1)	(2)	(3)	(4)
Total offshore enrolment, *t-1* (log)	0.164*** (0.04)	0.154*** (0.04)	0.078 (0.06)	0.060 (0.06)
Total offshore enrolment, *t-2* (log)			0.149* (0.06)	0.156** (0.06)
GDP per capita (log)	0.223 (0.17)	0.255 (0.17)	0.192 (0.16)	0.224 (0.16)
Enrolment in tertiary education (log)	0.236 (0.20)	0.289 (0.21)	0.532** (0.21)	0.607** (0.20)
Bilateral agreement		0.352** (0.12)		0.384** (0.14)
Constant	1.012 (3.72)	0.557 (2.58)	-4.442 (3.53)	-8.343** (2.70)
Country FE	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
# observations	662	662	514	514
Pseudo-R^2	0.977	0.978	0.984	0.986

Dependent variable: total skilled visas granted offshore.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Clustered robust standard errors are indicated in parentheses

TABLE 4: Skilled migration into Australia (2002-2011), PPML specification, augmented equation

	(5)	(6)
Total offshore enrolment, *t-1* (log)	0.282***	0.152**
	(0.05)	(0.06)
Total offshore enrolment, *t-2* (log)		0.253***
		(0.06)
GDP per capita (log)	0.750***	0.744***
	(0.18)	(0.17)
Enrolment in tertiary education (log)	-0.508	-0.023
	(0.33)	(0.25)
Unemployment (log)	0.424**	0.514**
	(0.15)	(0.16)
Bilateral agreement	0.272**	0.296*
	(0.11)	(0.13)
Constant	9.490	0.510
	(5.58)	(4.33)
Country fixed effects	YES	YES
Time fixed effect	YES	YES
# observations	446	340
Pseudo-R^2	0.984	0.991

Dependent variable: total skilled visas granted offshore.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.
Clustered robust standard errors are indicated in parentheses.

TABLE 5: Skilled migration into Australia (2002-2011), Logarithmic specification

	(7)	(8)	(9)	(10)
Total offshore enrolment, *t-1* (log)	0.103***	0.079*	0.104***	0.077*
	(0.03)	(0.04)	(0.03)	(0.04)
Total offshore enrolment, *t-2* (log)		0.023		0.062
		(0.04)		(0.03)
GDP per capita (log)	0.242	0.396*	0.416*	0.610**
	(0.15)	(0.18)	(0.18)	(0.22)
Enrolment in tertiary education (log)	0.174	0.032	0.173	0.139
	(0.12)	(0.17)	(0.12)	(0.17)
Bilateral agreement	0.081	-0.023	0.097	0.043
	(0.11)	(0.13)	(0.11)	(0.13)
Constant	-2.526	-1.831	-6.223**	-5.766
	(1.65)	(2.78)	(2.26)	(3.15)
Country fixed effects	YES	YES	YES	YES
Time fixed effects	YES	YES	YES	YES
N observations	618	482	755	564
Pseudo-R^2	0.971	0.976	0.968	0.972

Dependent variable:

- Columns (7)-(8); Log of (total skilled visas granted offshore).
- Columns (9)-(10); Log of (total skilled visas granted offshore +1).

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Clustered robust standard errors are indicated in parentheses.

CHAPTER 3

TRANSNATIONAL HIGHER EDUCATION AND INTERNATIONAL STUDENT MOBILITY: DETERMINANTS AND LINKAGE

A panel data analysis of enrolment in Australian higher education

Abstract: Transnational higher education (TNHE) is one of the most important, even if often neglected, aspects in the internationalisation of higher education. TNHE constitutes a strategy for universities to expand recruitment. Nonetheless, it is often argued that TNHE could constitute a way for the countries where it is implemented to retain their students and to become themselves destinations for students from abroad. Numerous questions about TNHE's potential to substitute traditional international student mobility currently feed the debate among scholars and stakeholders. The scarcity of data makes it difficult to answer these questions. This paper offers a macro level panel data analysis of enrolment in Australian higher education within Australia, i.e. onshore, and abroad, i.e. offshore. Two goals are pursued: first, to investigate whether and to what extent the macro determinants of traditional student mobility, as identified by the previous research, are also related to offshore enrolment and second, to examine the relation between the two phenomena in order to assess whether they could be considered substitutes. The results indicate that the macro factors which influence onshore enrolment are also related to offshore enrolment, even if some of these relations occur in different ways and with different strengths. Studying abroad seems to be connected particularly with the lack of labour market opportunities in the home country. No substitutive linkage is found between offshore and onshore enrolment, seeming to confirm, as hypothesised by the previous research, that the two types of enrolment are absorbing different segments of international students.

Keywords: Transnational higher education; international student mobility; substitutability between TNHE and student mobility; Australian higher education; internationalisation of higher education.

Levatino, Antonina (2016). Transnational higher education and international student mobility: determinants and linkage. A panel data analysis of enrolment in Australian higher education. *Higher Education*. Published online before print January 25, 2016, doi: 10.1007/s10734-016-9985-z. http://link.springer.com/article/10.1007/s10734-016-9985-z.

1. Introduction

One of the most remarkable internationalisation trends in higher education over the last few decades has been the spread of transnational higher education (TNHE). TNHE denotes any educational activity in which "the students are in a different country to that in which the institution providing the education is based" (GATE, 1997: 1). Through TNHE, students enrol "offshore" without having to move to the country of the education provider.

The shift to a 'trade rationale' in the higher education sector in the nineties, attested by, for example, the negotiations of the General Agreement on Trade in Services (GATS), led many universities to expand their activities across national borders in their search for new markets. Often these new markets are found in developing countries, where public spending on primary education and literacy had been greater than that on more advanced education (Altbach, 2009; Naidoo, 2011; Verger, 2010), and where for quite some time the growing demand for higher education has pushed students to seek foreign education overseas (Shields and Edwards, 2010). TNHE is thus viewed by universities as a way to enlarge recruitment (McBurnie and Ziguras, 2007). However, for governments opening their educational market to foreign providers, TNHE is often seen as a way to satisfy unmet demand for higher education in the country, to retain student outflows, and to become themselves destination countries for overseas students (Shields and Edwards, 2010; Wilkins and Huisman, 2011; Ziguras and Gribble, 2015).

Data on the volume of TNHE are limited, but figures published by some countries show the magnitude of the phenomenon and that its importance is growing. In 2012/2013, there were more students studying in British TNHE than international students enrolled directly in the UK. In fact, more than 25% of the students studying for a British degree were doing so wholly overseas (HESA, 2014). In 2013, more than 25% of the international students studying in Australian higher education institutions were enrolled offshore (Australian Government, 2014). In 2012, more than 20 000 students were enrolled in German TNHE worldwide (Geifes and Kammüller, 2014). While no official data are available on the number of students enrolled in US higher education offshore, there is evidence that this country constitutes the biggest provider of TNHE worldwide. It is, indeed, the country with

the most branch campuses[27] abroad (Lawton and Katsomitros, 2012) and American institutions are the most active in offering dual-degree programmes (Obst et al., 2011).

One of the main debates around TNHE concerns its potential in substituting onshore enrolment. Studying offshore can, indeed, present a less costly alternative to moving to the country of the education provider (Kapur and Crowley, 2008). The question, as posed by Skeldon (2005: 29), is: "If students can be trained locally, will they continue to move in such large numbers to developed countries for their education?"

Recent research tries to understand the motivations for choosing to study offshore (McNamara and Knight, 2014; Leung and Waters, 2013; Li et al., 2013; Pyvis and Chapman, 2005; 2007; Wilkins et al., 2012). Although valuable for deepening knowledge of TNHE students' motivations, these micro level studies do not permit the assessment of whether, at a macro level, an increase in offshore enrolment is associated with a decrease in onshore enrolment. The only existing pioneering effort made from a macro level perspective is essentially descriptive (Tsiligiris, 2014).

The present paper attempts to overcome these limits, offering a macro level panel data analysis of enrolment in Australian higher education, within Australia and abroad. There are two goals: first, to investigate whether and to what extent the macro determinants of traditional student mobility, as identified by previous research, are also related to offshore enrolment, and second, to examine whether a link exists between onshore and offshore enrolment, and for its sign in order to assess whether they could be considered substitutes.

2. Literature Review

2.1 Push-pull models of student mobility

Most existing research on international student mobility tries to identify which factors push people to study abroad and which ones attract them to a particular destination. In the international migration literature, the push-pull model is widely

[27] A 'branch campus' is a satellite campus of one university that is established in another country (Naidoo 2009). It constitutes one of the most common TNE activities.

applied and is usually implemented empirically, using the gravity equation[28] (Bessey, 2012; Karemera et al., 2000; Mayda, 2005). Within this framework, international migration flows from one country to another are modelled as a function of the characteristics of both countries. So, it is, for example, predicted that an increase in population in the country of origin and the associated "demographic pressure" (Hatton and Williamson, 2001) push more people to go abroad, whereas the cost of mobility reduces migration. Applying the gravity equation to her analysis of student migration to Germany, Bessey (2012) shows how long distances discourage student mobility, and that politically free countries send more students abroad.

Some studies focus on the characteristics of countries of origin that can determine the amount of people seeking higher education abroad. McMahon (1992), for example, finds that the level of economic development in countries of origin correlates negatively with the volume of tertiary student emigration, whereas the degree of participation of the home countries in the global economy correlates positively with student mobility.

According to existing research, as masterly revised by Beine et al. (2013a; 2014), one of the main reasons driving people towards studying abroad is the unsatisfied demand for higher education in their home country (Agarwal and Winkler, 1985; Lee and Tan, 1984) and/or the quality difference between foreign and domestic degrees (Aslangbengui and Montecinos, 1998; Gordon and Jallade, 1996; Mazzarol and Soutar, 2002). As outlined by Beine et al. (2013a; 2014), this strand of research is in line with the school-constrained model (Rosenzweig, 2006), according to which student migration occurs because of the inadequacy of educational opportunities in the home country. According to this model, when students make the decision to study abroad, they hope to acquire higher quality education and to return to their country of origin after graduation. Hence, an increase in the higher education supply in the countries of origin reduces the number of people seeking education abroad.

Rosenzweig (2006), however, provided support for a competing explanation: the migration model. This model predicts that seeking education abroad constitutes a strategy to immigrate permanently to a foreign country to escape from low returns on

[28] An exhaustive guide to gravity models of international migration can be found in Beine et al. (2015).

education in the country of origin (Beine et al., 2013a; 2014). According to this explanation, because of the differences in wages worldwide, an increase in the higher education supply in the traditional countries of origin of international students provokes a rise in the number of people seeking education abroad.

This reviewed research does not consider the existence of TNHE, and yet, TNHE changes the characteristics of the educational sector of the countries where it is implemented and increases the opportunities for students to obtain a foreign degree. It is therefore important to examine the phenomenon when modelling the international mobility of students.

2.2 TNHE: Motivations for enrolling

Literature on the determinants of TNHE enrolment is still rather scarce. Some micro level research has been carried out to understand the motivations that lead students to join TNHE. According to Pyvis and Chapman (2005), students enrol in TNHE because of the perceived higher quality of an international programme compared to a local one, to experience foreign curricula and new teaching styles, the chance to get in touch with Western lecturers, and the possibility of obtaining a degree that is more widely recognised than one from their own country might be. These motivations seem very similar to those of traditional mobile students.

Wilkins et al. (2012) somewhat confirm these results. Lacking a model that explains enrolment in TNHE, the authors use a slightly modified push-pull model of international student mobility as an analytical tool to understand the reasons behind the enrolment at a branch campus. They find that some of the motivations pushing people to enrol in this particular type of TNHE are very similar to those of international mobile students, especially regarding the low quality of the higher education supply in the home country. The preference for TNHE over migration to the country of the education provider is, according to Wilkins et al. (2012), essentially due to convenience factors, such as avoiding the financial and social costs of migration.

These kinds of results seem to suggest that TNHE could constitute a substitute for student mobility. However, Leung and Waters (2013) highlight how the TNHE students they interviewed could not even consider studying overseas because of

financial constraints. According to the results of a research project conducted by McNamara and Knight (2014: 34), TNHE meets the needs of students "who can't or don't wish to study abroad." These two studies suggest that TNHE is absorbing different segments of students which differ from traditional mobile students because of their lack of aspiration and/or capability to study abroad. Nonetheless, this strand of research was conducted at a micro level and used a convenience sampling strategy, hence permitting neither generalization nor checking for macro level trends.

2.3 Linkage between TNHE and student mobility

From a macro level perspective, the relationship between TNHE and student mobility has not been at all clearly assessed and contrasting hypotheses have been made. TNHE is, on the one hand, generally considered a strategy for universities to grow enrolment (McBurnie and Ziguras, 2007; Ziguras and McBurnie, 2015) among different segments of students (McNamara and Knight, 2014). With this conviction, governments exporting higher education often actively foster and promote the expansion of their universities' overseas operations (Ziguras and McBurnie, 2015). On the other hand, governments that open their educational market to foreign providers often do so with the goal of decreasing their student emigration (McBurnie and Ziguras, 2007; Ziguras and Gribble, 2015; Ziguras and McBurnie, 2015). For Kapur and Crowley (2008: 28–29), TNHE effectively permits the home country to retain those students "who would have otherwise gone overseas". For this reason, MacReady and Tucker (2011) worry that TNHE is making it possible for students to gain some of the advantages of an international experience without leaving their home countries, and that students are increasingly able to find attractive alternatives to mobility to the traditional destinations through TNHE in their home country or through mobility to a neighbouring country where TNHE services are offered. Potentially this situation indeed could entail a loss of the financial benefits associated with onshore international students (Shields and Edwards, 2010).

On the one hand, offshore activities can heighten the overseas visibility of the educational institution providing them, enhancing the participation in its onshore programmes. On the other hand, offshore activities also are a "risky business" and

could, in some cases, hinder the prestige of an educational institution, negatively affecting its capacity to recruit onshore (McBurnie and Ziguras, 2007).

This debate on the linkage between onshore and offshore enrolment has been almost exclusively speculative. To date, only one empirical attempt has explored this relationship from a macro level perspective (Tsiligiris, 2014). According to this study, the two types of enrolment cannot be considered as substitutes, because the student emigration from the host countries of TNHE considered in the study increased or remained unaffected by the growth of British TNHE in the area. Although inspiring, this study does not take into account other contextual factors that could be related to these trends, so the relationship should be tested further.

3. Case selection

Because of data availability, the case under analysis is Australian. Indeed, only the UK and Australia provide detailed data on enrolment in their TNHE. British data provide information on how many people are studying for a British degree by country of campus location. However, they offer neither information regarding the students' country of origin, nor their country of permanent residence. Australian data, by contrast, contain information on students' citizenship, country of birth, country of permanent residence, and campus location. The data thus allow for the exclusive consideration of international students, knowing where students permanently reside, and taking into account real mobility patterns. The data also cover a longer period of time.

Australia constitutes an interesting case study. It is one of the countries with the greatest reliance on trade in international education services. After the US and the UK, it is the third preferred destination country for students from abroad (OECD, 2013). Australia is also the OECD country with the highest share of international students (OECD, 2014) and the largest presence overseas relative to the size of its domestic tertiary sector (British Council & Oxford Economics, 2012: 21). Its institutions started to offer TNHE early on – since the mid-1980s – and its government had a key role in promoting the liberalisation of higher education (McBurnie and Ziguras, 2003). Australian TNHE is particularly present in Asia, the continent with the biggest supply of TNHE, and particularly in East Asia, the most

important source of international students worldwide (OECD, 2009; Brooks and Waters, 2011).[29]

4. Methodology

Using macro level data on enrolment in Australian higher education within Australia, i.e. onshore enrolment, as well as data on offshore enrolment, a panel data analysis is carried out. The analysis concerns the period from 2002 to 2011.

The aim is to explore the macro determinants of both types of enrolment and the linkage between them. In order to explore this linkage, however, one cannot simply regress one phenomenon on the other. Because the set of explanatory variables is likely to affect all types of enrolment, even if in different ways and with different intensities, a simultaneity bias could arise and result in spurious correlations. To find a specification that overcomes this problem, we rely on previous research on the linkages between international trade and foreign investment (Grünfeld and Monxes, 2003; Mitze et al., 2010). The model applied is a system of seemingly unrelated regressions equations (SURE). It is termed as such because the equations in the system seem unrelated and they can be estimated separately; they could, however, be related through the error correlation (Zellner, 1962). The logic behind the model is that it attempts to control for all the factors that might simultaneously determine the variables of interest. After all sources of simultaneity bias are assumed to be removed, the relationship between the residuals, i.e. the unexplained variation, is analysed in order to check for significant correlation and its sign. In order to take heteroscedasticity into account, the results are obtained with SURE by maximum likelihood[30], which allows for estimating clustered robust standard errors.

The data used provide information about the number of students enrolled in Australian higher education worldwide by country of permanent residence, after having excluded Australian citizens. The combination of these criteria makes it possible to exclude foreign students who reside permanently in Australia, having migrated there for other reasons (for example, as a child with the family) and to

[29] For an analysis of the position of Australia in the global 'market' of higher education, see Marginson (2007).

[30] The STATA ado file mysureg was used. It is downloadable from http://www.stata-press.com/data/ml2.html (last accessed 23/02/2015) as part of the ml_ado package.

capture actual student mobility[31]. Only students who enrol for the first time are counted. This is more accurate than counting all students enrolled for two reasons: 1) if they do not change higher education provider, people are counted only once; and 2) the time of commencement of study is more closely connected with the moment when the enrolment decision was taken. In order to exclude exchange students, only students starting courses leading to a degree are counted.

Enrolment in TNHE consists of two different types: there are people who are enrolled in the country of permanent residence and others who move to a third country where TNHE is offered. It is important to distinguish between them, because the first does not imply any migration, whereas the second can be considered as a novel type of student mobility. Hence, a system of three "augmented" gravity equations is estimated:

$$\ln(y1_{it}+1) = \alpha_0 + \alpha_1 \ln(EDU_{it}) + \alpha_2 \ln(LABOR_{it}) + \alpha_3 X_{it} + \alpha_4 Z_i + \gamma_t + \lambda_i + \varepsilon_{1it} \quad [1]$$

$$\ln(y2_{it}+1) = \beta_0 + \beta_1 \ln(EDU_{it}) + \beta_2 \ln(LABOR_{it}) + \beta_3 X_{it} + \beta_4 Z_i + \gamma_t + \lambda_i + \varepsilon_{2it} \quad [2]$$

$$\ln(y3_{it}+1) = \delta_0 + \delta_1 \ln(EDU_{it}) + \delta_2 \ln(LABOR_{it}) + \delta_3 X_{it} + \delta_4 Z_i + + \gamma_t + \lambda_i + \varepsilon_{3it} \quad [3]$$

where $y1_{it}, y2_{it}$ and $y3_{it}$ respectively indicate the number of students from country *i*, who, in a given year *t*, start to study for an Australian degree onshore within Australia, offshore in their own country of permanent residence, and offshore in other countries. A challenging aspect of these dependent variables, common to macro level research on migration, is their highly skewed distribution because of the high number of observations with zero values in the series. A common strategy to deal with this situation is to take a logarithmic transformation of the dependent variable. However, as the logarithm of zero is undefined, the observations with zero values are

[31] A particular type of student mobility, common amongst students from Taiwan, Hong Kong and South Korea, consists of moving overseas with the parents before the end of secondary school. One of the reasons for this type of migration is the attempt to pay lower tuition fees as permanent residents (Brooks and Waters 2011). For these three countries, I checked the correlations between the data by country of birth and those by country of permanent residence and found them to be very high. Thus, the use of data by permanent residence is unconcerning.

dropped and omitted from the calculations. These real zeros are, nonetheless, meaningful, because they are related to interesting explanatory factors. Following previous literature (Bessey 2012; Capuano 2009), a very small value is added, so that no observation is lost when the natural logarithm is taken.

EDU_{it} contains information about higher education in i. As a proxy for the unsatisfied demand for higher education, a variable measuring the gross enrolment ratio is added, i.e. the number of students enrolled in the country as a percentage of the people of an eligible age for tertiary education. This variable can be considered as a better proxy compared to the public expenditures in education, because this latter variable fails to capture other types of educational opportunities. Moreover, "funding for TNHE may be unrelated to overall higher education spending, since it often comes from economic development agencies and international relations departments" (McNamara et al., 2013: 33). In order to take into account the people who are studying abroad, another variable, the gross mobility ratio, is added. This is the number of students studying abroad as a percentage of total tertiary enrolment in that country. It is a proxy for what Carling (2014: 3) calls the "emigration environment", i.e. the overall mobility context common to the members of a community, which can influence their choices. As this variable can constitute a source of endogeneity in the model, the results obtained without it are also provided.

$LABOR_{it}$ indicates labour market opportunities in the home country that can motivate the choice to study abroad as a 'migration strategy'. A variable that measures unemployment rates is added as a proxy (as in Capuano, 2009).

X_{it} contains time-variant controls. As in previous research using gravity equation models (Bessey 2012; Mayda, 2005; Ortega and Peri, 2013), GDP per capita and population size are included. GDP per capita is a proxy for average economic wealth. Regarding the population, it is expected that its rise is associated with an increase in emigration. A variable indicating whether the citizens of one country must have a visa to enter Australia[32] is also included. Research shows that visa policies can have an effect on migration flows (Bertoli and Fernández-Huertas Moraga, 2013; Bertoli et al., 2011; Bertoli et al., 2013; Grogger and Hanson, 2011). Difficulties in getting

[32] Note that visa policies are based on citizenship, whereas the dependent variables are based on the country of permanent residence.

the visas required to enter Australia could also lead to a preference for offshore enrolment.

Z_i contains the time-invariant controls. Two proxies for the migration costs are included, namely the geographical distance between the country of permanent residence and Australia and a variable indicating whether they both share a common official language. These two variables are excluded in the specifications where country dummies (λ_i) are introduced. These dummies control for countries' unobserved heterogeneity, which might be correlated with all the variables in the empirical model. As only one country of destination is considered, they also capture country-specific economic and cultural links with Australia. It would be advisable to add a variable to control for TNHE policies in countries of origin. Unfortunately, to my knowledge, there is currently no dataset in which such information is available for every country in the world. As shown in recent literature on international migration, the stock of skilled migrants already living in the destination country constitutes an important attraction factor for students (Beine et al. 2013a, 2014). As remarked by Beine et al. (2013b: 26), "at the annual frequency, migration stocks are quite stable over time". This implies that we partly account for some network effects with the introduction of country dummies. While the inclusion of a network variable would be desirable if data were available, the specification and the limited time span over which estimations are conducted makes this omission less concerning.

All variables, their precise definition and data sources are provided in Table 1.

(TABLE 1 HERE)

All the specifications include γ_t (year dummies), accounting for the specificity of one particular year that can affect all the countries. As the analysis concerns only one country of destination, the introduction of year dummies also controls for changing characteristics of Australia that could influence the number of students seeking to study in Australian higher education. They control, for example, for changes in the Australian attitude towards international students but also for changes in the wages of tertiary educated workers in Australia, which recently were considered as a crucial pull factor for international students (Beine et al., 2013a; 2014).

Table 2 shows the descriptive statistics of all the variables included in the analyses.

(TABLE 2 HERE)

ε_{1it} , ε_{2it} and ε_{3it} are the error terms. SURE allows them to be correlated and makes it possible to check for the correlation coefficients of the cross-equation residuals at the end of the estimations. Negative correlations between them are interpreted as a substitutive relationship, whereas positive correlations are interpreted as an indicator of an enhancing association.

5. Results

5.1 Determinants of onshore and offshore enrolment

Table 3 presents the results of the empirical analysis of the determinants of enrolment in Australian higher education.

(TABLE 3 HERE)

M1 is the model in which only the variables of the baseline gravity equation (population, GDP per capita, distance and common language) are introduced. The results of Eq. [1], an equation which measures student mobility to Australia, are in line with previous research and highly statistically significant. Countries with a larger population and a higher GDP send more students abroad, whereas distance discourages migration. Sharing a common official language with Australia is positively associated with student mobility to Australia. This variable is less significant than the others. It is understandable, considering that the official Australian language is English, which is widely diffused in many countries as a second language. All the coefficients have the same signs and are significant in the other two equations in which the dependent variables count the students commencing an Australian higher education degree offshore. This is not surprising. People from countries that are very far from Australia may not have any information about Australian higher education, and Australian TNHE is surely more present in countries where there is already a demand for its higher education. This specification does not take into account the time-invariant specificity of each country, which can

motivate any sort of enrolment in Australian higher education. To deal with this unobserved heterogeneity, country dummies are introduced in the other two models.

In M2 and M3, according to the results of Eq. [1], GDP per capita and population are positively related to student mobility to Australia. However, only the variable measuring the population is statistically significant in both models, indicating how an increase in the "demographic pressure" (Hatton and Williamson, 2001) in one country pushes people to seek education in another. The variable connected with the satisfied demand for higher education in one origin country is positively related with student migration and an increase in unemployment is associated with an increase in the number of students who go to study directly in Australia. These results are both significant at the 5% level in M3, thus apparently supporting the migration model of student mobility proposed by Rosenzweig (2006).

In Eq. [2], the dependent variable refers to students enrolled directly in the country where they are residing. Consistently, the traditional gravity equation variables (GDP per capita and population) display negative signs. However, only the result for GDP per capita is statistically significant in M3, although with a low significance level of 10%. The dependent variable is here negatively associated with the unemployment rates. If the labour perspectives in the country improve, more people will choose to get foreign degrees directly in the country where they are living. Another significant result, at a level of 1%, concerns the visa requirement. This indicates that the obligation to have a visa to enter Australia increases the number of people who seek Australian higher education offshore in their own country.

Eq. [3] concerns students enrolled in Australian higher education offshore in a country different to that in which they are permanently residing. Here, GDP per capita and population display the same signs as in Equation 1, which is not surprising if we consider that this equation also estimates student mobility. However, in this estimation, all the coefficients are not significant, except the one that measures the student mobility ratio. This can be considered as a proxy for the "overall migration context" (Carling 2014), which may influence the mobility behaviour of people in the country. The results of this equation should be regarded with caution. There is still an important gap in the literature concerning this new form of student mobility,

and further research is needed in order to identify the possible mechanisms at stake. Additionally, further research should take into account variables related to the countries into which the students are moving to acquire TNHE.

5.2 The linkage between offshore and onshore enrolment

Table 4 shows the cross-equation residual correlations that indicate the linkage between the various types of enrolment in Australian higher education. The results of four models are presented. M0 refers to a model where only year dummies are introduced. M1, M2 and M3 show the cross-equation residuals' correlations of the three models presented in Table 3. A Breusch-Pagan test of independent errors is conducted[33] in order to test whether the residuals from the three equations are independent. The highly significant results of the test, shown in the table, indicate that the errors are not independent.

(TABLE 4 HERE)

In M0 the correlations are positive and very high. However, many factors are simultaneously affecting the three variables. Thus, these relationships are very likely spurious. As is apparent, introducing to the models relevant factors that can influence enrolment in Australian higher education, both onshore and offshore, leads to a gradual decrease in the coefficients. This proves that consideration of the simultaneity bias is fundamental when looking at the relationship between TNHE and student mobility.

In M3 all assumed sources of simultaneity are introduced into the model and the subsequently obtained cross-equation correlation of residuals are displayed. The results of M3, the most comprehensive model, show how the correlations are positive in all three cases, if however fairly weak. The Breusch-Pagan test indicates that these relations are statistically significant, at a level of 0.1%. These weak positive cross-equation residual correlation's coefficients seem to confirm that TNHE cannot be considered a substitute for traditional student mobility.

[33] This was conducted using the Stata official command sureg.

6. Discussion and conclusion

This research has two goals. It investigates whether and to what extent the macro determinants of traditional student mobility, or onshore enrolment, as identified by previous research, are also related to offshore enrolment. Subsequently, it examines whether there is a relationship between onshore and offshore enrolment, and searches for its sign in order to assess whether they could be considered substitutes.

In comparison with previous research, the analysis offered goes beyond the mere description of trends in both types of enrolment. Moreover, the research has three notable strengths. Firstly, the combination of the criteria of citizenship and of country of permanent residence of the students provides a fairly accurate measure of student mobility. Secondly, the methodology overcomes the simultaneity bias, which, if not considered, could result in spurious correlations. Finally, TNHE enrolment in a student's own home country, which does not imply any mobility, and TNHE in a third country, which can be considered a novel form of student mobility, are considered separately.

The consideration of only one higher education exporting country and the short time span available may undermine some results and call for caution in their interpretation. Nonetheless, the results are worth noting and present valuable starting points for future research.

Concerning the determinants, the results show that the macro factors that influence onshore enrolment are also related to offshore enrolment, even if some are related with a different intensity and in a different way. The requirement of a visa to enter Australia increases the number of people who seek Australian higher education offshore in their own country. An increase in the satisfaction of demand for higher education in one country is positively associated with the number of people who go to study in Australia. An increase in unemployment in one country of origin is also related to an increase in the number of people who seek higher education directly in Australia and with a decrease in those who enrol in Australian TNHE within their own country. These results seem to be in line with the "migration model" of student mobility (Rosenzweig, 2006). According to this model, all other things being equal, greater investment in higher education and the associated increase in tertiary

educated people in one country of origin are positively related to tertiary student emigration (Beine et al., 2013a; 2014; Rosenzweig, 2006).

Regarding the linkage between TNHE and student mobility, a positive and statistically significant relation, even if fairly weak, was found. The weakness of the linkage indicates that the different types of enrolment are absorbing different groups of students. Studying overseas on campus may normally be considered more prestigious than studying offshore (Brooks and Waters 2011). Thus, people who have the opportunity to study abroad may do so despite the existence of TNHE. The opportunity given through the implementation of TNHE can awaken new interest and determine enrolment in people who would not have considered foreign education if this opportunity were not available. The positive sign of the linkage may indicate that the amount of people from one country enrolled in Australian TNHE increases visibility and heightens interest in onshore programmes and vice versa. This shows how, as stressed by Findlay (2011: 181), in order to understand "the geography of international students", it is fundamental to consider the "supply-side practices". In the future, migration scholars will, hopefully, give more attention to the spread and importance of TNHE.

In light of these results, it seems that TNHE by itself is not a sufficient strategy for countries that traditionally send students to retain them. On the contrary, an increase in the higher education supply in one country of origin, and the consequent increase in tertiary-educated individuals, could even increase the number of people seeking higher education abroad. All this should be taken into consideration by those countries that aim to reduce their student outflows merely by opening their educational market to foreign providers. If not accompanied by an improvement in labour opportunities and conditions, this policy may indeed be counterproductive. Indeed, labour opportunities in the countries of origin seem to play a crucial role and their improvement is negatively related to the number of people who go study abroad. These results clearly show how higher education cannot exclusively be considered as a consumption act; rather, it is also a strategy to acquire 'capital' to be spent after graduation in the home country labour market or overseas. Thus, labour migration theories can contribute definitively to better understanding enrolment in

international education and should, therefore, enjoy more consideration in future research by higher education experts.

The results of this paper encourage a reflection on the need to overcome "educationalism" (Dale and Robertson, 2007), by taking into account extra-educational structure and dynamics when analysing educational issues, as was highlighted by Verger (2010). They also point out the importance of focusing on educational structures and dynamics when analysing extra-educational issues, such as the international mobility of people. Hopefully, these kinds of considerations will inspire future research and stimulate fruitful interdisciplinary collaborations.

This research is not exempt from shortcomings and further research could be carried out in several directions. If data spanning longer periods of time were to become available, it would be interesting to conduct a dynamic panel analysis to check whether and how past values of the dependent variables are related to current ones. If data were to be produced in other national settings, it would be useful to test the results of this study with other countries that are very active in offshoring their higher education supply. Data availability from different countries would also permit taking into account multilateral resistance to migration due to the attractiveness of alternative destinations (Bertoli and Fernández-Huertas Moraga, 2013) and to pay more attention to the phenomenon of offshore enrolment in third countries. Another fundamental point that should be explored further concerns the perceived prestige of TNHE programmes in comparison to those offered at home campuses. More space for "the voice of the students" (Pyvis and Chapman, 2005: 40) should ultimately be provided, along with implementing micro level surveys, and conducting qualitative in-depth interviews among TNHE students in order to better understand how they perceive TNHE, what drives them to enrol beyond labour opportunities, and their attitudes towards international mobility.

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8. Appendix: Tables

TABLE 1: List of variables

Variable	Description	Source
Onshore commencements	Number of students who start studying in Australian higher education within Australia.	Australian Department of Education
Offshore commencements (immobile)	Number of students who start studying in Australian higher education in the country of permanent residence.	
Offshore commencements (mobile)	Number of students who start studying in Australian higher education in a country not equal to that where they are permanently residing. Distance education is not considered. In the original dataset, counts less than 5 (from 1 to 4) are indicated as < 5. These counts are substituted with 3.	
Geographical distance	Bilateral distance between the biggest cities weighted by the share of the city in the overall population. (Mayer and Zignano 2006).	CEPII
Common official language	= 1 if the country shares an official language with Australia	CEPII
GDP per capita	Gross domestic product divided by midyear population. Data in constant U.S. dollars.	World Bank Development Indicators
Total population	All residents regardless of legal status or citizenship (midyear estimates).	World Bank Development Indicators
Gross enrolment ratio, tertiary	Total enrolment in tertiary education expressed as a percentage of the population in the official age group corresponding to tertiary level education.	UNESCO/UIS
Gross mobility ratio	Ratio of students abroad in relation to those enrolled in domestic tertiary institutions.	UNESCO/UIS
Unemployment rate	Share of the labour force that is without work but available for and seeking employment.	World Bank Development Indicators
Visa	= 1 if citizens of the country must have a visa to enter Australia.	DEMIG*.

*The research leading to the collection of these data is part of the DEMIG project and received funding from the European Research Council under the European Community's Seventh Framework Programme (FP7/2007-2013)/ERC Grant Agreement 240940. See: http://www.imi.ox.ac.uk/projects/demig (last accessed Mar. 20, 2015).

TABLE 2: Summary Statistics

Variable	Min.	Max	Mean	Std. Dev. (overall)	N. Obs.
Onshore commencements +1 (log)	0	10.62459	3.450617	2.308943	1167
Offshore commencements (immobile) +1 (log)	0	8.525558	.7604989	1.912788	1167
Offshore commencements (mobile) +1 (log)	0	7.086738	1.247176	1.518581	1167
Distance weighted (log)	7.914384	9.777957	9.441428	.319513	1152
Common official language	0	1	.1901893	.3926194	1162
GDP per capita (log)	4.682266	11.63054	8.26924	1.622685	1167
Population (log)	12.43626	21.01901	16.05215	1.640854	1167
Unemployment rate (log)	-1.609438	3.653252	1.901208	.748353	1167
Gross enrolment ratio (log)	-1.50792	4.769764	3.101249	1.166028	1167
Gross mobility ratio (log)	-1.94547	7.304046	1.547505	1.251766	1167
Visa	0	1	.9537275	.2101647	1167

TABLE 3: Enrolment in Australian higher education, onshore-offshore (2002-2011), SURE

EQUATION. 1 ***Dependent variable:*** **Onshore comm.**	**(M1)**	**(M2)**	**(M3)**
Total population	0.783***	0.843*	0.959**
	(0.07)	(0.36)	(0.37)
GDP	0.696***	0.337**	0.204
	(0.10)	(0.13)	(0.13)
Distance	-3.354***		
	(0.80)		
Common language	0.625*		
	(0.31)		
Gross enrolment ratio		0.063	0.384*
		(0.09)	(0.18)
Unemployment		0.221*	0.201*
		(0.11)	(0.10)
Visa		0.078	0.062
		(0.08)	(0.08)
Gross mobility ratio			0.358*
			(0.17)
Constant	16.814*	-12.968**	-15.284**
	(7.53)	(5.01)	(5.32)
EQUATION. 2 ***Dependent variable:*** **Offshore comm. (immobile)**	**(M1)**	**(M2)**	**(M3)**
Total population	0.453***	-0.577	-0.532
	(0.10)	(0.38)	(0.40)
GDP	0.328***	-0.324	-0.375+
	(0.09)	(0.23)	(0.22)
Distance	-2.993***		
	(0.74)		
Common language	0.867**		
	(0.34)		
Gross enrolment ratio		0.238	0.137
		(0.19)	(0.18)
Unemployment		-0.433+	-0.441+
		(0.25)	(0.25)
Visa		0.515**	0.509**
		(0.18)	(0.18)
Gross mobility ratio			0.360
			(0.31)
Constant	18.729**	9.891	9.007
	(6.79)	(6.68)	(7.12)
EQUATION. 3 ***Dependent variable:*** **Offshore comm. (mobile)**	**(M1)**	**(M2)**	**(M3)**
Total population	0.439***	0.797	0.882
	(0.07)	(0.60)	(0.58)
GDP	0.191**	0.385+	0.289
	(0.06)	(0.21)	(0.21)
Distance	-2.163***		
	(0.62)		
Common language	0.702**		
	(0.23)		
Gross enrolment ratio		0.038	0.272
		(0.12)	(0.17)
Unemployment		0.050	0.035
		(0.12)	(0.11)
Visa		0.004	-0.009
		(0.15)	(0.15)
Gross mobility ratio			0.260*
			(0.13)
Constant	12.918*	-13.611	-15.291+
	(5.87)	(8.43)	(8.22)
Observations	1054	1167	1167
Clusters	148	153	153

***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05; +p ≤ 0.1.

TABLE 4: Cross-equation residual correlation matrix

Linkage	**(M0)**	**(M1)**	**(M2)**	**(M3)**
Onshore – Offshore immobile	0.659	0.344	0.076	0.072
Onshore – Offshore mobile	0.746	0.515	0.060	0.050
Offshore immobile – Offshore mobile	0.656	0.376	0.092	0.089
Breusch-Pagan Test: $p \leq 0.001$	***	***	***	***

***$p \leq 0.001$

CHAPTER 4
TRANSNATIONAL HIGHER EDUCATION AND STUDENT (IM)MOBILITIES

Migration aspiration and capability of students enrolled in German transnational higher education

Abstract: Through transnational higher education (TNHE) students can obtain a foreign degree without leaving the home country. Because of this, it has been often argued that TNHE implies immobility as opposed to and/or as an alternative to student mobility. The issue is, however, more complex than often assumed. This paper offers an in-depth examination of TNHE students' attitudes towards studying abroad and of the possible constraints and deterrents to their mobility. The meanings the students give to their TNHE enrolment are also explored. The range of insights provided will benefit future research both among migration and higher education scholars.

Keywords: Transnational higher education, student mobility, student immobility, migration aspiration, migration capability, cross-borders higher education, mobility of higher education programmes and institutions.

1. Introduction

Transnational higher education (TNHE) is a key facet of the internationalisation of higher education. Its main characteristic is that students can get a foreign degree without having to move into the country "in which the awarding institution is based" (Council of Europe, 2002). This means that programmes and education providers cross borders, whereas students can stay in their home country. Hence, it has often been speculated that TNHE implies *immobility* as opposed to and/or as an alternative to student mobility (Kapur and Crowley, 2008; Larsen and Vincent-Lancrin, 2002; OECD and World Bank, 2007; Vincent-Lancrin, 2005; World Trade Organisation, 2001). The issue is, however, more complex than often assumed. Firstly, there is to date no empirical evidence of this hypothesised substitution effect. Furthermore, TNHE can itself originate new flows of student mobility into the countries where it is implemented. TNHE programmes also often imply short stays abroad in the country of the awarding institution, promoting organised short-term student mobility. The international character of TNHE can ultimately constitute the motivations of people enrolling in such programmes. It may also influence their mobility after the obtainment of the degree. Finally, the most active countries in providing TNHE seem to see it as a way to increase their universities' "potential to attract gifted graduate students from abroad" (Hahn and Lanzendorf, 2008: 31).

Existing literature on the relationship between TNHE and mobility is essentially speculative (Chiang, 2012; Kapur and Crowley, 2008; Larsen and Vincent-Lancrin, 2002; OECD and World Bank, 2007; Vincent-Lancrin, 2005; World Trade Organisation, 2001), based upon numerical simulations (Lien and Wang, 2012) or conducted at a macro level (Levatino, 2015; 2016; Tsiligiris, 2014). An amount of micro level studies have been recently conducted to better understand TNHE students' views and motivations (Li et al., 2013; MacNamara and Knight, 2014; Pyvis and Chapman, 2005, 2007; Waters and Leung, 2013; Wilkins et al., 2012; Wilkins and Huisman, 2011). These studies, however, are not specifically focused on TNHE students' attitudes towards migration and approach this aspect only in a marginal way. The investigation of TNHE students' attitudes towards mobility would not only enable a deepened understanding of the rather unknown phenomenon of TNHE and of its often presumed potential in decreasing student emigration, but

would also shed new light on the phenomenon of traditional student mobility from a different perspective: the one of those who decided to remain immobile or to go to different destinations.

By analysing original data collected among students enrolled in German TNHE and by following a mixed-methods approach, this paper offers an in-depth examination of their attitudes towards studying abroad at the time they took the decision where to enrol and of the possible constraints and deterrents to mobility. In light of these attitudes, it then explores why they chose TNHE and the meanings this enrolment acquires for them. The main research questions are: To what extent did students enrolled in German TNHE want to study directly in Germany? Why did they decide to study for a German higher education degree without going to Germany? Was student mobility an option for them? Which were, if any, their deterrents and barriers to mobility? Which were the main motivations behind their choice? Considering their attitudes towards mobility and their motivations, what meaning do they assign to their enrolment in TNHE?

In order to achieve these goals, the theoretical conceptualisation of migration as a function of aspiration and capability provided by Carling (2002; 2014) and de Haas (2011) is operationalized. The results reveal a rich and insightful picture of the diverse attitudes of TNHE students towards mobility, shedding light on the variety of motivations and feelings behind the choice of TNHE. In light of such different attitudes, they also show how TNHE enrolment can have different meanings for different groups of students. The range of novel topics offered is wide and will surely benefit future research both in the migration and higher education field.

The remainder of the paper is organised as follows. The next section reviews the relevant literature. Section 3 presents some theoretical considerations. Sections 4 and 5 respectively describe the data and the mixed-method approach used. Section 6 presents and discusses the results, whereas the last section concludes.

2. Literature Review

2.1 The decision to study abroad

Most of the literature on student mobility has aimed to identify which factors push people to leave their countries of origin to seek higher education abroad and which

ones attract people to a particular destination (Lee and Tan, 1984; Mazzarol and Soutar, 2002; McMahon, 1992).

Among the main reasons pushing people towards an emigration to study, there are the unsatisfied demand for higher education in the origin country (Agarwal and Winkler, 1985; Lee and Tan, 1984) and quality discrepancy between a foreign and a domestic degree (Aslangbengui and Montecinos, 1998; Gordon and Jallade, 1996). According to this strand of scholarship, students go abroad to acquire higher education not available in their country of origin. If this is the case, then the possibility offered by TNHE should convince them to stay.

Rosenzweig (2006) provides, however, another explanation: the migration model. This predicts that education abroad constitutes a strategy to immigrate permanently to a foreign country, studying abroad becoming a strategy of gaining entry and/or permanent residence in another country (Findlay and King, 2010; Ong, 1999). If study abroad is a step toward a permanent migration, TNHE may not be considered as an equal substitute for it.

Other reasons to push people to study abroad are the possibility of personal development (Bargel et al., 2009), enhanced career opportunities (Bargel et al., 2009; Heublein et al., 2008) and the experience itself (Heublein et al., 2008; King and Ruiz-Gelices, 2003). The international character of TNHE programmes and the prospect of short stays abroad can constitute in this sense a very appealing opportunity for young people to satisfy these kinds of desires.

The push-pull model assumes that the factors that motivate students to emigrate are related exclusively to countries of origin, while pull factors relate to destination countries. However, negative and positive factors can be identified both at origin and at destination (Lee, 1966; Zheng, 2003). In this respect, Arango (2000: 293) proposes to complement the pair "push-pull" with its counterpart, the "retain-repel". These kinds of considerations are particularly pertinent for this research. In fact, TNHE offers some advantages related to the – staying in the home country- option and some of the benefits of the – going abroad to study – option.

2.2 (Im)mobility as a choice

One of the first scholarly works to have investigated the reasons why students choose to study in a branch campus has been conducted by Wilkins et al. (2012). The study shows that some of the motivations which push people to study in a branch campus are very similar to those of international mobile students (particularly regarding scarce quality of domestic higher education). However, several respondents declared that they did not find any reason to emigrate because they were achieving the same degree offered abroad, avoiding the language difficulties, the social and time costs associated with a migration. These results let the authors hypothesize that TNHE in the long run could become a potential alternative to student mobility. However, from the study, it is not clear whether the respondents really had the option to go abroad, i.e. if they would have had the resources needed to study abroad.

In fact, as emphasised by Brooks and Waters (2011: 17), "choice necessitates resources". The performance of behaviour depends to some extent on "non-motivational factors such as the availability of opportunities and resources", which represent the "people´s actual control over the behaviour" (Ajzen 1991: 182). Literature has shown how mobile students are normally relatively 'privileged' and have financial support from their family (Brooks and Waters, 2010; 2011; Findlay and King, 2010; Xiang and Shen, 2009; Murphy-Lejeune, 2002). Considering TNHE enrolment as a potential alternative to student mobility means assuming that people who enrol in TNHE have concretely had the option to study in the country of the education provider and that they could exercise the choice to not go. However, empirical research conducted among TNHE students shows that for many of them studying overseas was "out of question" (Waters and Leung, 2013: 160) because of financial (King et al., 2011; Waters and Leung, 2013) and/or cultural constraints (King et al., 2011). Altbach (2010) hypothesised that many students enrolled in international branch campuses would not have had earned a spot onto the same programmes in the home campus. According to MacNamara and Knight (2014: 18), "TNHE meets the needs of students who, for a variety of reasons, are not able to study abroad full time".

Even if they provide several useful insights, these studies conducted among TNHE students are not focused on the migration desires, attitudes and opportunities

of TNHE students; they thus approach this aspect only in a marginal way. This paper addresses this gap, based on a study conducted among students enrolled in German TNHE.

3. Migration as a function of aspiration and capability

To take into account the richness of the elements emerging from the revised literature, the theoretical conceptualisation of migration as a function of aspiration and ability/capability provided by Carling (2002; 2014) and de Haas (2011) seems particularly useful.

The 'aspiration to migrate' is the individual preference for migration over staying, while 'capability/ability' refers to people's effective possession of the means needed to migrate (Carling, 2014; de Haas, 2011). Applying this theoretical framework, we will firstly explore the aspiration of TNHE students to study in Germany and, then, their capability to do it at the time they took the decision on where to enrol.

It is important to note that, although clear and operational, the theorisation of migration as a function of aspiration and capability contains a high degree of complexity. First of all, in order to be able to aspire to perform behaviour, people have to possess some, albeit imperfect (Epstein, 2002) information about that behaviour. Access to information also needs resources. Furthermore, internal individual dispositions, which are difficult to observe, can obstruct the aspiration to migrate (Shewel, 2015). Regarding the capability, moreover, more important than the "actual behavioural control" is the "perceived control", i.e. "the perception of the easiness or the difficulty of performing the behaviour of interest" (Ajzen, 1991; 196). This perception of the capability could also be related to the internal individual dispositions mentioned by Schewel (2015).

This intrinsic endogeneity between aspirations and capabilities makes the investigation highly complex. Furthermore, the mix of push-pull and "retain-repel factors" (Arango, 2000: 293) means that both aspirations and capabilities cannot be conceived "simply as something one has or does not have", rather as "existing along a spectrum" (Schewel, 2015: 7). Finally, the high-risk nature of the decision to study abroad and of its consequences together with the young age at which it is usually taken makes it a very difficult decision. Subjective judgments, emotions, (Maringe

and Carter, 2007), chance factors and impatience (Solomon, 2002) can play a crucial role and erode the rationality of the choice (Maringe and Carter, 2007). Considering this complexity, a mixed-methods approach seems the most suitable strategy. Both quantitative and qualitative data were collected simultaneously through a survey designed and implemented by the author in 2014.

4. The German case and the survey

Germany is one of the five biggest countries of destination of international students worldwide. For approximately fifteen years, German higher education institutions have implemented partnerships and TNHE projects abroad. Germany nowadays constitutes one of the major players in the TNHE arena.

The German case allows the shedding of light on some important aspects. First, the gap between offshore and onshore German higher education is, in terms of financial costs, not as big (Clausen et al., 2011) as in the case of other countries (for example, Australia or the UK). Indeed, living costs in Germany are relatively moderate and tuition fees charged by its universities within the country are non-existent or very low. This makes the two options more similar in terms of costs and permits exploring the potential of TNHE from a privileged position. The selection of Germany also permits a disentangling of the role language plays in decision-making and in future mobility aspirations. The teaching language of universities in Germany is still mainly German. German TNHE is, instead, normally in English but German courses (sometimes compulsory) are always offered. Moreover, short-term stays in Germany are often part of the curriculum, and where this is not the case, they are promoted and possible. Hence, the selection of German TNHE also allows investigation into the influence of the offer of periods abroad in the country of the education provider in the study-choice but also on future migration aspirations.

The survey was implemented among students enrolled in eleven German TNHE projects in ten countries. These are all the existing German-backed universities, with two exceptions[34], and one of the three branch campuses of German universities worldwide. Foreign-backed universities are independent universities which are mentored and supported by one foreign university or a consortium of several ones

[34] The exceptions are the Lebanese German University and the Wadi International University in Syria, where the survey could not be implemented because of the delicate situation in the region.

(Lanzendorf, 2008a). This kind of TNHE activity, which constitutes the most common way German TNHE has developed, is also undertaken by US, British, French, Canadian and Swiss universities (Lanzendorf, 2008b). The difference between a foreign-backed university and a branch campus is that this latter does not require a local partner.

The survey was conducted with the support of the universities involved, which provided basic descriptive information regarding their students and sent all the students enrolled an e-mail with an invitation and link to an online survey. This has ensured that all enrolled students were reached[35] and that no other people could enter the survey. This represents a point of strength compared with previous surveys conducted among TNHE students (MacNamara and Knight, 2014; Wilkins et al., 2012), where the participants have normally been recruited using a convenience sampling strategy (Wilkins et al., 2012) or through a message placed in the main social network sites which could be entered by anyone (MacNamara and Knight, 2014).

Table 1 presents the universities included in the study.

(TABLE 1 HERE)

The dataset was restricted to students who are not German or part of an exchange programme. Incomplete answers were filtered out. A comparison of the data obtained with the information on gender and fields of study provided by the universities permits checking for the representativeness of the responses gathered. The refusal to collaborate of GUC representatives provokes that students from this university are heavily underrepresented. Students from the other universities where the survey was implemented with the support of the universities are, instead, overrepresented (with the exception of the GJU). Regarding fields of study, the comparison shows that students studying languages/cultural studies and natural sciences are overrepresented (respectively by 6.10 and 3.99 percentage points) whereas students studying

[35] An exception is the case of the Germany University Cairo (GUC), where the Egyptian representatives refused to cooperate. In this unique case, the survey was implemented using a snowball sampling. The German partners of the GUC provided descriptive information about all students enrolled, so the extent of the representativeness of the data collected can be checked. The Andrassy University Budapest (AUB) representatives did not send the invitation to the forty doctoral students enrolled.

engineering, human medicine and arts are underrepresented (respectively by 7.64, 3.99 and 1.95 percentage points). The data are representative of those students studying law, economics and social sciences. Additionally, a slightly higher percentage of women took part in the survey compared with the total sample population (3.07 percentage points). In the quantitative analysis, controls for university attended, gender and field of studies are included in the model.

5. Methodology

The mixed methods strategy used is a concurrent procedure (Cheswell et al., 2003) where quantitative and qualitative components were collected and are analysed together in order to provide a comprehensive picture of the topic under research. An equal status is given to both components and, when presenting the results, the information is integrated and conjointly presented.

The empirical analysis is made up of three steps, which reflect the three goals of the paper:

1. Analysis of the aspiration to study directly in Germany at the moment the students took the decision to enrol in the current university.
2. Examination of the capability to study directly in Germany.
3. Scrutiny of the reported motivations explaining the choice to enrol in the current university and exploration of the meanings the students assign to their TNHE enrolment.

The majority of the questions are retrospective. This could raise concerns. In order to deal with this issue, as suggested by Pearsons et al. (1992), the questions were formulated using strategies which promote personal recall. The recalled decision is not very long before the point of data collection (a few months or, at most, a few years), so the problem is of less concern. Furthermore, in the quantitative analysis, we control for this potential problem, adding a control for the number of semesters the respondent has been enrolled in the current university. Finally, the combination of quantitative and qualitative information allows the capture of more diverse aspects of the decision and lends greater accuracy to the results.

5.1 Quantitative component

In order to quantitatively explore the differences between students reporting different levels of aspiration, ordered logit regression is applied. The dependent variable comes from the answer given to the following question: *Please think back to the time you had to decide where to study. Did you desire to study directly in Germany?* The possible answer is about an ordinal variable which takes five possible points: from 1 = Not at all to 5 = Very much. This five-points-answer permits the capture of the complexity of the decision-process in which students are involved when taking the decision on where to study higher education, in particular to take into account for the mix between push-pull/retain-repel factors.

As the dependent variable has five categories in a meaningful order, ordered logit regression is considered better than linear regression. First of all, differently to ordered logit, linear regression assumes that the difference between 1 and 2 is the same as that between 2 and 3. There is no reason to assume this (Cohen et al. 2000). Secondly, linear regression makes the strong assumption that two respondents who give the same answer have the same attitude. Ordered logit, instead, estimates the latent distribution of the attitude.

Two explanatory variables are included. The first one concerns the fact of having already studied the German language previously. Language can be an obstacle to mobility (Findlay et al., 2006). The other variable concerns previous stays in Germany. Murphy-Lejeune (2002) highlights how experience of travel prior enrolling has a significant impact on the attractiveness of a particular destination as an educational option. Moreover, the fact of having already experienced a given behaviour provides crucial information about our personal behavioural control (Bandura, 1986). Gender, field of study, university attended, and a variable which controls for whether or not the student is enrolled in the country of origin are also added in the models. In order to control for the potential recall bias, a variable indicating the number of semesters the respondent has been enrolled in the current university is always included.

Table 2 displays the variables included in the analyses and their descriptive statistics. This information also provides a profile of the respondents.

(TABLE 2 HERE)

To examine capability to study directly in Germany, a descriptive statistical overview of the answers given by students to different questions regarding their decision-making and the possible constraints to studying abroad is provided. In order to shed further light on possible differences and similarities by gender and by country, this overview is provided, disaggregating the information according to these two variables.

5.2 Qualitative component

The quantitative scrutiny is continuously integrated and enriched with the qualitative information coming from one semi open-ended question and two open-ended questions.

The semi-open question concerns the reasons why the respondent took the decision not to study directly in Germany. Different items were provided, but the respondents had the opportunity to add any information they considered to be relevant. The two open-ended questions concern respectively the reasons why the respondent did not study in another institution in the home country and the likelihood of moving abroad (to work, live or for further study) after graduation and the related reasons.

The qualitative information has been brought together and analysed with MAXQDA, following the coding strategy described by Strauss (1987). In order to gain insights on the data analysed and in particular to capture differences between different groups, the mixed methods functions of the software (crosstabs and segment matrixes) were used. In the presentation of the results, the indication of the gender and of the university attended will always be provided after quotes.

6. Results and discussion

6.1 Aspiration to study in Germany

Figure 1 shows the relative frequency histogram of the dependent variable which measures the aspiration to study directly in Germany at the time they took the decision.

(FIGURE 1 HERE)

The majority of the respondents display high levels of aspiration. A relatively large amount of respondents situate themselves in the middle category, revealing a more ambivalent attitude. Integrating the qualitative and quantitative information, it is possible to better understand what the different reported levels of aspirations hide. Among those who display very low levels of aspiration to go to Germany, for example, different subgroups can be distinguished. The first one is made up of people who declare to have not considered the option to go abroad at all. Another subgroup is made up of people who are already mobile. They mainly moved with their parents because of their work or because of security problems in their home country. They study in the framework of TNHE because they have troubles gaining access to national universities of the new country or because they do not feel ready to enrol in them, as reported by this student:

> 'I lived my entire life in Kuwait and was not ready to settle in deeply with the local Egyptian culture'. (GUC\Male\1934).

Another subgroup is made up of people who would have liked to go abroad to another country:

> 'It wasn't even an idea [studying directly in Germany], I was more United States oriented'. (GUC\Male\2089)

The complexity and the difficulty of the decision to study abroad transpire from the answers given by many respondents, who reported different levels of aspirations (2-4) to go to Germany. Many of them declare to have been 'confused' (VGU\841\Male) because 'it was a hard transition to take' (GJU\1483\Female) or because of the difficulty to 'determine exactly what I want' (GKU\480\Female). Some report a lack of encouragement and support.

The irrational character the decision can sometimes have (Baldwin and James 2000) is emblematically stated by one of the respondent:

> 'Basically i did not know anything about the national universities and my parents as well so i enrolled randomly...' (GUtech\1197\Female)

Also, among people who display high levels of aspiration (4-5), an ambivalent attitude sometimes emerges. Their high migration aspiration is sometimes counterbalanced by a contradicting statement. For example:

> 'I didn't want to live in a new country alone'. (GUC\2091\Female)
>
> 'I love to eat Chinese food'. (CDHK\292\Male)

A very common feeling, which can be observed among respondents who display very diverse levels of migration aspiration, is worry, or even fear. Specifically, this is about the fear of living alone in a foreign country, with a foreign language, but also the fear of failure or 'of being irresponsible of my actions in different countries and different culture' (GUtech\1142\Female). One reports the fear of culture shock (VGU\650\Male) and another of racism (GUC\2076\Female). These feelings of fear seem to confirm existing research according to which risk-averse personality discourages migration behaviour (Fischer et al., 1997). They also clearly endorse the proposition made by Arango (2000) to integrate retain-repel factors when analysing mobility-immobility decisions.

The responses given by a small group of respondents highlight a rather neglected aspect by the literature: the fact that some students did not take any decision. These respondents declare the difficulty they have in answering the questions because of this reason:

> 'I don't know. My parents chose, not me, unfortunately!!' (GUtech\1086\Female).
>
> 'My sponsor didn't give any other options'. (GUtech\1165\Male).

To explore the differences between people who reported different levels of aspiration, we look at the results of the ordered logit regression (Table 3). Two tests (the likelihood ratio test and the Brant test) were performed in order to check for the proportional odds assumption, i.e. the assumption that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable. The non-significant results of both tests confirm that the assumption is not violated and that the results are valid.

(TABLE 3 HERE)

To facilitate the interpretation of the results, the proportional odds ratios are also displayed. They permit comparing respondents who are in categories greater than *k* versus those who are in categories less than or equal to *k*, this last being the level of the dependent variable.

In the case of those who have not studied German before the enrolment, for example, the results indicate that the odds of a very high aspiration to study in Germany (5) versus the combined other 4 lower categories is 0.515 lower than for those who had already studied German, the other variables being held constant. In the same way, the odds of the combined four above levels of aspirations versus the lowest (1) is 0.515 times lower for those who did not study German before than for those who did, given the other variables are held constant in the model. This expected result, significant at 0.1%, may indicate that people who know German are more tied to and/or have more information about Germany and German culture. It may also indicate that they can imagine living in Germany because they do not have the language barrier. From the other side, this can also be endogenous: those people who would like to go to Germany may have already started to study German before. Even if this is the case, it is interesting to further explore why these people who have a high aspiration to go to Germany and know the German language did not realise their desire to study directly in Germany. The results also indicate that those who had already visited Germany are more likely to be observed in a higher category (this result is, however, not significant).

If we look at the fields of study, it can be remarked that the fact of studying law, economics or social sciences decreases the likelihood to be observed in a higher category compared to people who study languages or cultural studies. This can be due to the fact that law, economics and social sciences are more likely to be related with one country and people who study such subjects are less likely to be attracted by the perspective gained from studying abroad compared with people who study foreign languages. No significant results emerge for the other fields of study. Actually, natural sciences or technical degrees are less bound to a specific country and are more 'transportable' abroad.

The fact of studying in the own home country seems to have no relationship with the level of aspiration to go to Germany. As it is possible to see in the descriptive

information, only 161 respondents out of 1380 reported to study in a foreign country and the majority of them declared to have travelled with their families to escape from security problems in the home country or for parents' working reasons. The very low number of respondents, who could be considered as real 'mobile students', does not enable the study of this issue in a deeper manner.

The results seem to indicate that female respondents are less likely to be observed in higher categories than male ones. If from one side, it could merely indicate a general attitude of female respondents to indicate lower categories than the male ones, it can also really be the indicator of a lower desire to study directly in Germany among female respondents. This could indicate that female respondents are more attached to their home country or to their significant others. One of the main deterrents for students to go abroad is, indeed, the separation from family and friends (Bargel et al., 2009; Heublein et al., 2008). In the questionnaire, students were provided statements explaining their decision to study German TNHE and not directly in Germany. They could rate the accuracy of the statements in explaining their decision from 1 = Not at all to 5 = Very much. If we look at the responses given to the statement on attachment to family and friends by gender (Figure 2), we can see how 21.26% of female respondents found the statement very accurate versus only 9.69% of male respondents, seeming to confirm this hypothesis.

(FIGURE 2 HERE)

The lower aspiration of female respondents compared with male ones may, however, also be related to a lesser amount of perceived control on the behaviour among female respondents. In this sense, it could be that female respondents display a sort of "acquiescent immobility" (Shewel 2015, 6), i.e. inability to migrate associated with an acceptance of this constraint. In order to explore this aspect, we should look at the responses given to the statements related with the capability to study directly in Germany.

6.2 Capability to study in Germany

As stated by Carling (2014, 7), "a comprehensive theory on capability and mobility needs to engage with the family-related constraints on choice". This is particularly

true in the case of young people, who often still depend financially on their family. Family is important in other ways beyond this. According to Murphy-Lejeune (2002), the desire to study abroad can be positively related with the acceptance by the family of the possible move. Perceived family perception norms are central (De Jong, 2000). The fact that important reference individuals or groups (such as the family for young people) approve or disapprove a given behaviour has been identified as a very important factor influencing the personal attitude towards behaviour (Ajzen, 1991). We can imagine that for young people the family consensus does not only influence the attitude towards the behaviour, but is also an important component of the perceived control if the student depends financially on the family´s resources. Figure 3 shows the results of the statement regarding the family constraints.

(FIGURE 3 HERE)

It seems that the family constraints to mobility have been generally perceived by female respondents as more important than by male ones. This result together with the lower amount of aspirations may also indicate that female respondents of the survey, more attached to the family, tend to be more prone to accept parents' decisions, lending tentative support to the "acquiescent immobility" hypothesis (Shewel, 2015: 6). It could also be that, in some countries, gendered norms about immobility are interiorised, so that they are not even contested, rather individuals automatically adapt their preferences to them. The responses given by two female respondents who reported low levels of aspiration (2) seem emblematic of these attitudes:

> 'Actually I didn't have much choice since my parents do not let me to study abroad'. (GUtech\1052\Female).
>
> 'I am a female and normally it is not easy to go and study away from our home country'. (GUtech\Female\1086).

In order to check for variation in these gender dimension by countries where German TNHE is located, Figure 4 shows the answers disaggregated by country of study.

(FIGURE 4 HERE)

As revealed by Figure 4a, family constraints are reported to be an important deterrent particularly in Egypt and Oman. They are less reported as important in Hungary, China and Vietnam and not at all in the case of students studying in a German university in Turkey. As shown in Graph 4b and Graph 4c, with the exception of China, female respondents reported to give more importance to these kinds of constraints than male ones. The differences by gender are particularly sharp in the case of the United Arab Emirates, Oman, Egypt, Jordan, and Kyrgyzstan. This could be related to the role of women in Muslim countries. However, Kazakhstan is also a predominantly Muslim country and there the differences by gender are not so pronounced. The present paper is not focused on gender differences, but future research should be definitively conducted to further explore this issue.

It is intriguing to observe how a number of people (of both sexes) who reported very low levels of aspiration, when asked why they did not enrol directly in Germany, have added something related to external constraints to mobility (lack of money, lack of information, difficulty to get a visa, language constraints, etc.) and not to their desire, sustaining the plausibility of the "acquiescent immobility" hypothesis (Shewel, 2015, 6). Certainly, it could be argued that these retrospective questions are prone to post-rationalisation and that people who could not go abroad because of external constraints often report their unwillingness to go as a way to justify their immobility. Even if this mechanism can surely be at stake, it does not explain why other people, under similar incapability circumstances, reported, instead, very high levels of aspiration to study abroad. This distinction can surely be further explored and addressed by future research. Figure 5 displays the results concerning other external constraints that could have limited students' agency by country of study.

(FIGURE 5 HERE)

The first graph (5a) confirms that one of the main obstacles to student mobility is a lack of financial means (Rodríguez González et al., 2011; Souto-Otero, 2008). According to the second graph (5b), the insufficiency of marks does not seem to be a decisive reason to not study directly in Germany. Indeed, only 4.06% of the respondents indicated that the statement was very accurate. Actually, the

insufficiency of marks was cited by some of the respondents more as one of the causes for not earning a spot within national higher education than for not going abroad. The third graph (5) shows the results regarding visa constraints. Previous research has shown that visa policy has an effect on migration flows (Bertoli et al., 2011; Grogger and Hanson, 2011). As it is possible to remark from Figure 6, no big gender differences seem to appear regarding these other constraints to mobility.

(FIGURE 6 HERE)

The qualitative information provided by students on this issue highlights that another reported perceived barrier to mobility is a lack of information about studying abroad and, specifically, about the procedures of inscription and admission. Health issues (personal problems or those of important family members) were also raised by some of the participants to explain the impossibility/difficulty for them to go abroad. It is, however, language which is one of the most reported causes which explain the 'immobility' decision. It is associated with the fear of failure and the difficulty to study in an unknown language, but also with the fear of not being able to communicate and remaining alone. It is also related with the concrete need to be in possession of a language certificate in order to be admitted to a German university in Germany and/or to the connected time cost of the language preparatory course required to study there. From the other side, the opportunity to learn a new language or, for some respondents, to further study a language already acquired during secondary education also constitutes for TNHE students one of the motivating factors to enrol in it. This confirms the results shown by previous research on the role language can have both as a deterrent (Findlay et al., 2006) as well as a pull factor which increases the will of people to study a foreign education (Heublein et al., 2008; Rodríguez Gonzalez et al., 2011).

6.3 Meanings of TNHE enrolment

Table 5 shows a list of the reported motivations for enrolling in German TNHE and not in another university in the country of origin. The Table indicates whether each of the reported motivations listed was mentioned by some students of each university

considered in the study. The number of times each motivation was coded is indicated in parentheses.

(TABLE 5 HERE)

The most reported reasons concerns the characteristics of the university chosen and/or the characteristics of the higher education sector in the country of origin. People from all the universities reported to have chosen the attended programme because of its international character and/or for its relationship with Germany. Many respondents seem to believe that studying an international degree and knowing a new language will improve their career opportunities. The majority of respondents complain about the low quality of domestic higher education compared to the perceived superiority and the prestige of German higher education. According to Brooks and Waters (2011: 132), in some countries, Western educational credentials are often overestimated and "imbued with symbolic power", regardless of their real value. Even if some respondents report to have already had an unsuccessful experience in national higher education, many of them did not have any direct experience of it. This seems to confirm that more than the real quality of the degree it is a matter of how people perceive it. One of the main reported causes of enrolling in German TNHE is indeed the poor quality of higher education in the country of origin (reported in all the countries except the UAE). Lack of security, overly full classrooms, and lack of opportunity are also cited. In the case of GUC, GJU, GKU, and VGU, some respondents report to not have chosen a national higher education institution because of the bad atmosphere that they felt to be inappropriate for their "social class". These kinds of motivations, clearly connected with the expansion of higher education enrolment and with social stratification in higher education in these countries, are worthy of further investigation.

The enrolment was sometimes also due to incidental factors: availability of the preferred subject, availability of scholarships and, timing. This shows how, as already put forward by Carlson (2013), coincidence and happenstance can sometimes be at play. In some countries (Kazakhstan, Oman, Turkey, and Vietnam), people have to indicate a list of preferences and students are accepted according to the marks received. For many of these students, the programme attended was merely one

of the preferences indicated. The choice is also sometimes due to convenience issues, such as the availability of the preferred subject, a more convenient location of the university, shorter length of the courses, etc.

Using the function "segment matrixes" of MAXQDA, it is possible to combine this information with the level of aspirations to go to Germany reported. The meanings attributed by students to their enrolment in TNHE are diverse. However, it is possible to recognise homogeneous groups which can be connected with the different attitudes they had towards student mobility at the moment they took the decision to enrol.

TNHE as everything else

For those who display low levels of aspiration to go abroad, who can be referred to as the 'voluntary immobile' (Carling, 2002; 2014, de Haas, 2011; Schewel, 2015), TNHE is merely a way to acquire higher education. They enrol in German TNHE neither because of their interest for Germany nor because of the programme's relationship with Germany. In this sense, this group confirms the results of a study conducted by Li et al. (2013) among Chinese TNHE students enrolled in Australian, UK and US programmes, according to which the 'image' of the country of the awarding institution was not significant in explaining their choice.

The reasons people within this group reported for choosing a foreign education are often exclusively related to the insufficiency of the higher education sector in the home country (lack of quality and of facilities, corruption, disorders, and security issues) and of its characteristics. A female student from Oman reported to not have enrolled in national education:

> 'Because all girls have to wear Abaya and I hate wearing it'. (GUtech\1030\Female).

The case of this female respondent may indicate that TNHE enrolment, like studying abroad (Brooks and Waters, 2011), can be a way for some women to evade perceived discrimination and disadvantages of the home country higher education system.

TNHE is, occasionally, the way to overcome discrimination in access, as for this respondent coming from a third country and living in Oman:

> 'Enrolling in national university in Oman is difficult because I do not hold the nationality even though I am Omani in origin. Enrolling

> in *my home country*[36] was not successful because I am a Muslim'. (GUtech\1109\Female).

The elitist system and the difficulties to earn a spot because of constraints often related to the type of secondary school attended are also reported. In the case of Vietnam, a common reason for choosing TNHE was the curriculum taught in the national universities which is perceived as being too theoretical and whose courses are considered 'unnecessary' (VGU\834\Female). In light of such results, it is possible to observe how the presence of TNHE represents a possibility to diversify the higher education sector in the country where it is implemented, to overcome its limits, and to guarantee access to categories having difficulties of entry.

The majority of these students did not report anything regarding a possible enrolment abroad, declaring to have not considered this option at all. For these students, TNHE does not seem to constitute an alternative to student mobility, rather an alternative to other universities in their country. We actually do not know what they would have done if the TNHE opportunity would have not been available. The attachment they report to their country suggests that mobility would not be so probable. This counterfactual dimension should be, however, further explored. Interestingly, for one student, who wanted to stay in the country, the presence of TNHE was the way to find a compromise with her parents who wished to send her abroad to study:

> 'Because my parents wanted me to go abroad so this was the only choice to satisfy my desire and theirs'. (GJU\1552\Female).

In this case, it could be hypothesised that, in the absence of TNHE, this student may have been forced by her parents to study abroad. Another student wrote:

> 'German Jordanian University was my first and only option in my home country. If that haven't worked out I would've studied abroad in England'. (GJU\1509\Male).

This seems to indicate that TNHE could, in some case, avoid the mobility option for those students who do not want to go abroad but, because of external constraints, are obliged to. In this sense, it could be a good means to avoid an *involuntary mobility*.

[36] The home country of the student is omitted in order to guarantee anonymity.

Finally, it is interesting to remark how, even though all the respondents in this group wrote that they were willing to stay in their home country at the moment of the enrolment decision, a wide number of them reported that they would like to go abroad, and often to Germany, after their graduation and they think it is very likely they will. This could be interpreted as a sort of internationalisation of aspirations:

> 'I didn't even think to study outside my country but later i changed my mind'. (GUC\2013\Male).

> 'I've had six months of my last semester in Frankfurt - Germany, and I found it very attractive to me to move there, because of the quality of education, living condition, working environment and also great music, too!' (VGU\680\Male).

For some students, who could not think about going abroad because of their incapability to go, enrolment in TNHE may have allowed access to mobility (Kaufmann et al., 2004; Moret, 2015), which also obstructed their "capacity to aspire" (Appadurai, 2004), opening their imagination to mobility.

A 'compromise solution'

Another category of TNHE students is that of those students who reported various levels of mobility aspiration and capability but who were clearly prevented from moving by fear, doubts, confusion, indecision, etc. They often display contradicting and ambivalent feelings towards mobility. This group of TNHE students is the one which most clearly displays the mixture of push-pull/retain-repel factors (Arango, 2000).

For those students who did not feel ready to go abroad, TNHE seems to be a way to gain time and expertise:

> 'I was scared to leave to a completely different place, maybe for my masters I can go, since I have become more independent now'. (GJU\1527\Female)

> 'I did not feel ready to live in Europe and its culture, as I was living in Saudi Arabia before that, so Jordan was a better choice as a transition phase between the two'. (GJU\1514\Female)

In this latter case, the choice of TNHE seems to represent an intermediate step towards another destination. This kind of attitude has already been reported by Berriane (2009) in research conducted among Sub-Saharan African students in

Morocco. Perrin (2009: 147) defined this kind of stepwise student migration as a "transit skilled migration".

For those who had an ambivalent attitude towards student mobility, TNHE seems to offer the opportunity to experience a softer mobility through the short stays abroad offered:

> 'I wanted to stay in my home country but to study a short period abroad to learn about other cultures'. (GUCL\44\Male)

In this way, for some students TNHE is perceived as a unique opportunity to do both, becoming the optimal choice:

> 'Because i wanted to experience both: I wanted to stay close to friends and family, as well as experience the independent foreign life. German Jordanian University offers both'. (GJU\1469\Female)

> 'VGU is like study abroad at home'. (VGU\855\Male)

For these students, TNHE is not an alternative to student mobility, which would be improbable due to their numerous doubts and fears. TNHE for them is itself student mobility, because of the opportunity it offers to go abroad for short periods in an institutionalised and safer way.

TNHE as ersatz of student mobility and as a migration strategy

For those who display high levels of aspiration to go to Germany or into another foreign country but were obliged to stay due to the lack of resources needed to move (visa, money, language certificate, etc.) or to other external constraints (parents' decision, health problems, etc.), TNHE seems to be an ersatz of student mobility. It is the 'closest thing to going abroad' (GUC\2198\Male), as eloquently explained by a respondent. For some of them, TNHE enrolment, with its organised year abroad, represents itself a 'more affordable' (GJU\1528\Female) way to study abroad. On this, it is important to stress the semantic difference between 'ersatz' and 'substitute'. Even if like 'substitute', 'ersatz' indicates one thing that takes the place of another, it really implies something that has typically inferior value. In this sense, TNHE seems to become for these students a second-best. These students clearly did not have the option to go abroad because of a lack of the resources needed to move.

For the majority of people in this group, who are clearly 'involuntary immobile' (Carling, 2002; 2014; de Haas, 2011; Schewel, 2015), TNHE seems to become the

unique occasion which transforms them from merely "aspiring migrants", who idealise their migration (Carling, 2002) to "would-be migrants" (Xiang, 2014), who concretely organise their lives to prepare themselves for migration. They seem, indeed, convinced that enrolment in TNHE will provide them the set of resources needed (language, a transportable degree, soft skills, information, networks, etc.) to concretely make their migration possible. Here are some examples:

> 'Because my German language would be strong enough, and I am strong academically and also when I go for the one year in Germany I will make the most benefit of it by making connections and working hard on my skills'. (GJU\1506\Male).

> 'Because I will be holding a certificate from Germany and I will be able to contact with German people in *Deutsch*'. (GUC\Egypt\2034\Female).

It is possible to observe a rather rational attitude towards the realisation of the migration desire, which often assumes the connotation of a planned "stepwise" (Paul, 2001) strategy:

> 'My main target was to get introduced to the European culture and this particular thing was introduced by the German Jordanian University for being a multicultural university in addition to the language that I get to learn'. (GJU\1476\Male)

Actually, for some respondents the period abroad was effectively a way to assure their migration after the graduation:

> 'After I finished my training period in Germany, the company offered me a permanent job when I finish my studies'. (GJU\1542\Female)

It is interesting to remark how some among the 'involuntary immobile' (Carling 2014) students who wanted to go abroad into another country, changed their attitude towards mobility, with particular regard to the preferred destination. As explained by this student who wanted to study in the US:

> 'I've been there [in Germany] for my Bachelor, i know the language, and with my skillset, I could very well find a job that would pay at least five times more for the comparable activity. Plus I like the culture and I fitted well when i was there'. (GUC\2089\Male)

It is not always because they changed their aspiration, rather more because they recognise that the mobility resources acquired through their enrolment in German TNHE makes them more likely to go to Germany, which now appear as a more rational choice. This is the case of this student who wanted to study in Italy:

> 'Because i don't know Italian that much and my university makes me having more chances going to Germany'. (GUC\1991\Male)

Ultimately, for the students in this group, TNHE seems not to be considered a substitute, rather a gateway to mobility.

7. Conclusion

In this research TNHE students' attitudes towards mobility and the meanings they give to TNHE enrolment were for the first time deeply explored. The data analysed are original and have been generated by a survey conducted in eleven German TNHE projects in ten countries. The methodology used allowed the capture of the highly complex nature of the students' decision-making and a better understanding of their motivations.

The study showed the pertinence of the conceptualisation of migration as a function of aspiration and capability (Carling, 2002; 2014; de Haas, 2011) as a valid theoretical framework and an effective analytical tool to shed light on the voluntary/involuntary causes of immobility. As proposed by Schewel (2015), however, it has been considered fundamental to not consider 'aspiration' and 'capability' as binary categories, rather as fluid ones. This has permitted the capture of the intricate mixture of feelings and contradicting attitudes which can cohabitate the same individual. This mixture is often the result of the tension between push-pull/retain-repel factors (Arango, 2000). In the case of prospective higher education students, it is also often the consequence of young age and a lack of independence, particularly from family, and the ensuing constraints to individual agency.

The analyses revealed that TNHE students cannot be considered as a monolithic group, but rather they have fairly heterogeneous motivations and attitudes. The obtained picture is rich and insightful and several observations can be made.

Only a small portion of respondents did not report any aspiration to study in Germany. Of the respondents in this group who did not display any willingness to

study abroad, the majority seems to find TNHE an attractive alternative to national universities. TNHE enlarges the educational supply in the country and allows the overcoming of the limits and discriminations of the domestic education sector. Some of the respondents in this group reported that studying abroad was very difficult. The low aspiration to study abroad reported could be a way to post-rationalise and justify their immobility. It could also be that, as put forward by Schewel (2015), they display a sort of 'acquiescent' attitude, i.e. they were unable to study abroad, but they serenely accepted these constraints. Many respondents in this group declared that they 'never even thought' about studying abroad at the time they took the decision on where to study. For these respondents, we do not know what they would have done if no TNHE were available, but their reported attachment to the country and indifference towards the mobility option let us hypothesise that student mobility would have been improbable. This counterfactual dimension should be, however, further explored in the future. Interestingly, a certain amount of these students who did not want to go abroad, report a sort of internationalisation of aspiration which leads them to desire to go abroad after graduation. Even if this internationalisation of aspiration does not concern everybody, this phenomenon seems to be rather common and confirms the concerns already raised by some scholars regarding the potential brain drain-effect of TNHE (Chiang, 2012; Lien and Wang, 2012; Reichert and Tauch, 2003) and should be further explored. Certainly, it will be interesting to verify whether these new post-graduation mobility aspirations will be satisfied or whether TNHE can have as an effect an increase of frustration and 'involuntary immobility' (Carling, 2002; 2014; de Haas, 2011; Schewel, 2015) among TNHE graduates. The implementation of panel surveys could be a good way to improve this aspect in the future.

Only for a very small group of students, TNHE seems to have prevented an emigration to study. This applies to a small group who asserted that, if no TNHE opportunity existed, they would have probably been 'obliged' to go overseas. Further research on student mobility should try to shed more light on the neglected phenomenon of *involuntary student mobility* in order to capture its extent and the potentialities of TNHE in avoiding it.

A large number of respondents, instead, reported fairly ambivalent feelings towards mobility, displaying doubts, fears and hesitation. TNHE seems to constitute for them a 'softer' form of student mobility, through the organised and 'safer' periods abroad it entails.

A large group of students who really desired to go abroad to study but could not go because of external constraints (money, visa requirements, parents' constraints, health problems and language issues) has been finally identified. For these students, TNHE is not a substitute to mobility, but a second-best option, which can often strategically be used to acquire the resources needed to go abroad and/or to reach the desired destination afterwards.

All these results suggest that TNHE can be a very good way to overcome the limits (and perceived limits) of the higher education sector in many countries. They also suggest that, in some cases, TNHE can be a good way to avoid an involuntary mobility. Otherwise, more than a substitute for student mobility, it seems that TNHE is a good way for countries which provide educational services offshore to enlarge the pool of young skilled people interested in the country and to reduce the 'costs' of the mobility for those who wanted to be mobile but could not because of a lack of resources. If from one side, this seems to be providential for individuals enhancing their "capacity to aspire" (Appadurai, 2004) and letting them acquire the needed resources to be mobile, it also proposes again the same ethical dilemma of the brain drain debate which has been at play for several decades (Dumitru, 2012; Levatino and Pécoud, 2012).

Indeed, even if this paper is focused on individual behaviour, it is obvious that individual choices are shaped by institutions (governments and universities) which favour and promote the immigration of some groups and establish economic and normative obstacles to the mobility of others. Future research should further investigate the rationale of countries and higher education institutions which are particularly active offshore, regarding the link between TNHE and mobility. It will be relevant and interesting to investigate whether and to what extent TNHE is viewed by developed countries as a way to stimulate migration aspiration and lower the migration costs of a particularly desirable group of migrants. In this sense, developed countries, active in the TNHE arena, are in a privileged position because, through

their immigration policies, they can ultimately decide who *can* immigrate into the country and who *cannot*. In this sense, the governance of migration intersects higher education governance. As already remarked by Garneau and Mazzella (2013), there is evidence that an important link between institutions in charge of the internationalisation of higher education and those who are in charge of 'managing' international migration exists. Hopefully, this paper will encourage future research to focus on this important issue.

A further interesting aspect that emerged from the analyses concerns a sort of gendered dimension of student immobility. Female respondents are revealed to be less likely to desire to study abroad. This result seems to be sometimes related to the passive acceptance of their incapability to migrate and to the acceptance of gendered norms on immobility in some countries. Even if the gender issue was beyond the scope of this research, it constitutes a very relevant issue which could feed future research and could definitively be deepened in the future through in-depth interviews.

This research is not exempt from shortcomings and further research could be carried out following several directions. Indeed, even though the case of Germany as an education provider country is highly relevant and suited to explore some particular features (such as the language issue), the consideration of only one case prevents generalisations being made. Further investigation should be conducted in other national settings in order to check for similarities and differences. Moreover, German TNHE was not so suitable with regard to students who move to another country in order to acquire TNHE. Very few respondents to our survey are real 'mobile students', so they could not be considered separately. Another weakness of the study is related to the probable post-rationalisation mechanisms which could be at the base of the responses of many students. Despite this, as already pointed out by Shewel (2015), post-rationalisation mechanisms do not explain why students, who reported similar capability constraints, could display such heterogeneous attitudes towards mobility and the exploration of these differences is anyhow relevant and interesting. A possible way to further explore these differences in the future could be the exploitation of information collected in the framework of the survey regarding

personality traits of the respondents[37]. Past research has indeed highlighted the importance of exploring the relation between personality traits and migration decision making and behaviour (Paulauskaité et al., 2010; Jokela, 2009; Boneva et al. 1998; van Ecke et al., 2005; Zimmermann and Neyer, 2013). This information could also definitively help to shed more light on the relationship between migration aspirations and capabilities, which is worthy of further attention.

Another fruitful direction for future research would be the comparison of the data collected among international students enrolled in German TNHE worldwide with those collected by the *Sozialerhebung des Deutschen Studentenwerks* among international students who study directly in Germany in order to statistically analyse differences and similarities between the two groups, which share the choice of German higher education, but differ in the mode of attendance and migration status.

Even if the paper provides some disaggregated information, the comparison between different countries of origin of the students and/or countries of location of the universities was beyond its scope. Further and deeper research is needed to approach this issue and to search for the causes of the differences and similarities between the countries where German TNHE is offered. In depth-case studies taking into account more contextual information could shed light on these aspects.

Despite its limitations, this research contributes to existing research in several ways. It explores and presents original data on a still unknown phenomenon, giving "voice" (Pyvis and Chapman, 2005: 40) to a rather neglected segment of international students, providing a deeper understanding of the potential of TNHE. It also constitutes one of the first attempts to deeply explore the connection between TNHE and mobility. Focusing on the 'other side' of mobility and on its deterrents and barriers, the analyses conducted also give some useful intuitions not only for the literature on TNHE, but also for that on traditional student mobility. The range of topics and meaningful insights provided will surely benefit future research. They can serve as a point of reference for future surveys and as a set of thematic areas and topics to be further scrutinised, both quantitatively, through inferential statistical analyses, and qualitatively, through in-depth interviews.

[37] The survey includes one section on personality traits. The instrument used is the TIPI, provided by Gosling et al. (2003). It is about a 10-item measure of the Big-Five personality dimensions.

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9. Appendix: Tables and Figures

TABLE 1: Universities included

University	Location	Total number of students enrolled*
Andrassy University Budapest (AUB)	Hungary	178
Chinese German College of Postgraduate Studies (CDHK)	China	307
German Jordanian University (GJU)	Jordan	3670
German-Kazakh University (GKU)	Kazakhstan	593
German University Cairo (GUC)	Egypt	9235**
German-UAE College of Logistics (GUCL)	UAE	101
German University of Technology Oman (GUtech)	Oman	377
Kyrgyz-German Faculty for Informatics (KSUCTA)***	Kyrgyzstan	98
Turkish German University (TGU)	Turkey	122
Technische Universität Berlin- El Gouna (TUB- El Gouna)	Egypt	52
Vietnamese German University (VGU)	Vietnam	719

* It refers to the academic year in which the survey was conducted (2013/2014). The information has been provided directly by the universities.
** It excludes students enrolled in MBAs.
*** These data were collected in the framework of the pilot study.

TABLE 2: Descriptive statistics and variables' description

Variables	**Description**	**Categories**	**Frequency**	**%**
Gender	Categorical variable	Male	712	51.59
		Female	668	48.41
Semester of study	Number of semesters the students has been studying in the current university*	Preparatory course	25	1.81
		1-2	538	38.99
		3-4	371	26.88
		5-6	205	14.86
		7-8	142	10.29
		9-10	78	5.65
		> 10	21	1.52
University attended	University where the student is enrolled	AUB	33	2.39
		CDHK	92	6.67
		GJU	279	20.22
		GKU	138	10.00
		GUC	300	21.74
		GUCL	14	1.01
		GUtech	197	14.28
		KSUCTA	26	1.88
		TGU	28	2.03
		TUB-El Gouna	29	2.10
		VGU	244	17.68
Immobile student	1 = the student is studying in his/her country of origin	1	1219	88.33
		0	161	11.67
Field of study	Field of study according to the German Statistical Federal Office (*Statistisches Bundesamt*)	Languages and Cultural Studies	98	7.10
		Law, Economics and Social Sciences	343	24.86
		Mathematics and Natural Sciences	270	19.57
		Human Medicine	42	3.04
		Engineering	605	43.84
		Arts	22	1.59
Knowledge of German language	1 = the respondent never learnt German before enrolling in the current university	1	908	65.80
		0	472	34.20
German stay	1 = the respondent has already been in Germany but not in the framework of the studies currently undertaking	1	131	9.51
		0	1249	90.51
Total number of responses			1380	

* To be succinct, in the Table, the descriptive statistics of this variable is presented as grouped. In the regression, the various categories have been entered individually.

FIGURE 1: Aspiration to study directly in Germany (*n* = 1380)

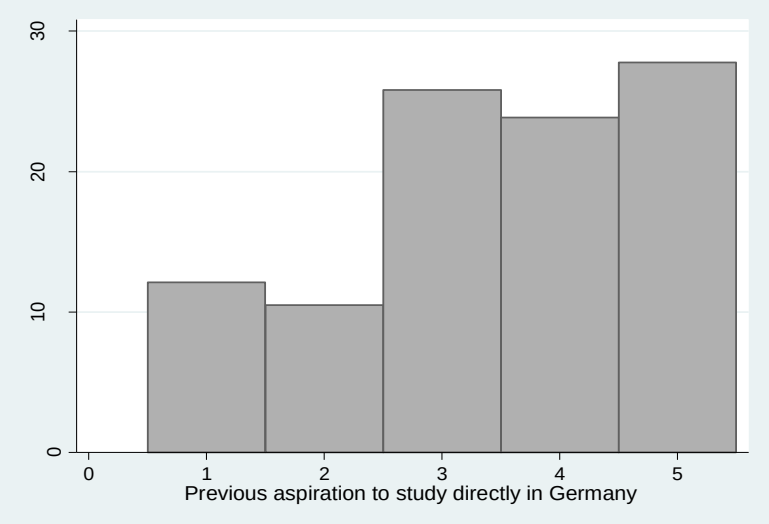


TABLE 3: Ordered logit regression (*Dep. var: Aspiration to study in Germany*)

	1		2		3	
	Coeff. (SE)	Odds ratio (SE)	Coeff. (SE)	Odds ratio (SE)	Coeff. (SE)	Odds ratio (SE)
Gender						
Male	(ref.)		(ref.)		(ref.)	
Female	- .376***	.687***	-.425***	.654***	-.475***	.621***
	(0.11)	(0.07)	(0.10)	(0.07)	(0.10)	(0.06)
Immobile student	.009	1.009	-.070	.933	-.001	1.007
	(0.17)	(0.17)	(0.17)	(0.16)	(0.17)	(0.17)
Relationship with Germany						
No previous knowledge of German			-.663***	.515***		
			(0.12)	(0.06)		
Previous stay in Germany					.281	1.323
					(0.18)	(0.23)
Field of study						
Language and Cultural Studies	(ref.)					
Law, Economy and Social Sciences	-.632**	.531***				
	(0.23)	(0.12)				
Mathematics and Natural Sciences	-.273	.761				
	(0.23)	(0.17)				
Human Medicine	.464	1.591				
	(0.36)	(0.57)				
Engineering	-.033	.968				
	(0.22)	(0.21)				
Arts	-.697	.498				
	(0.42)	(0.21)				
Obs.	1380		1380		1380	

The variables 'university attended' and 'number of semesters' are added in all the three models but not presented.

***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05; +p ≤ 0.1.

FIGURE 2: Attachment to family and friends (by gender)

I did not want to be far from my family and friends (*n*=1380)

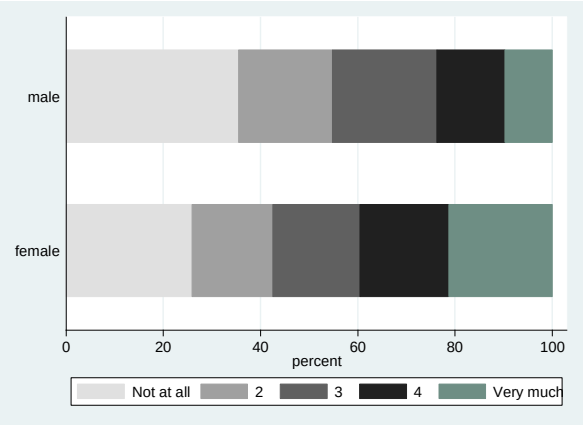


FIGURE 3: Family constraints (by gender)

My parents did not want me to go to Germany (*n*=1379)

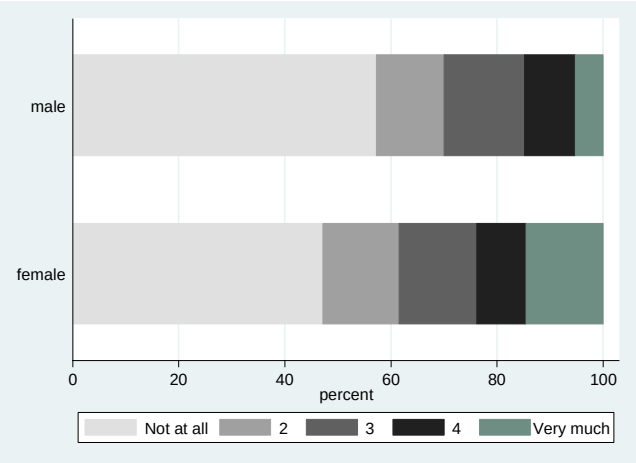
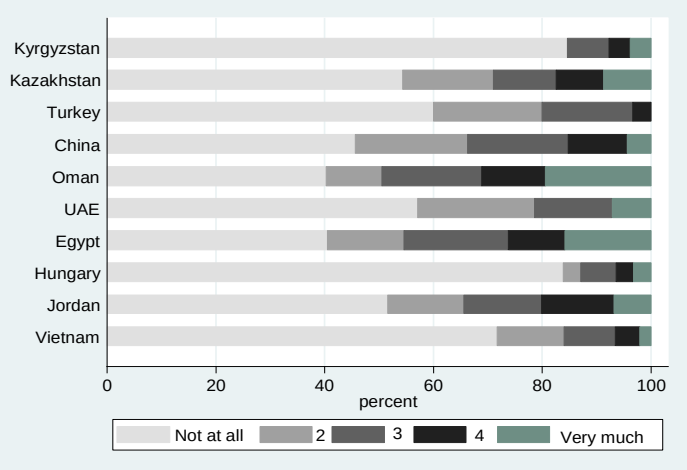
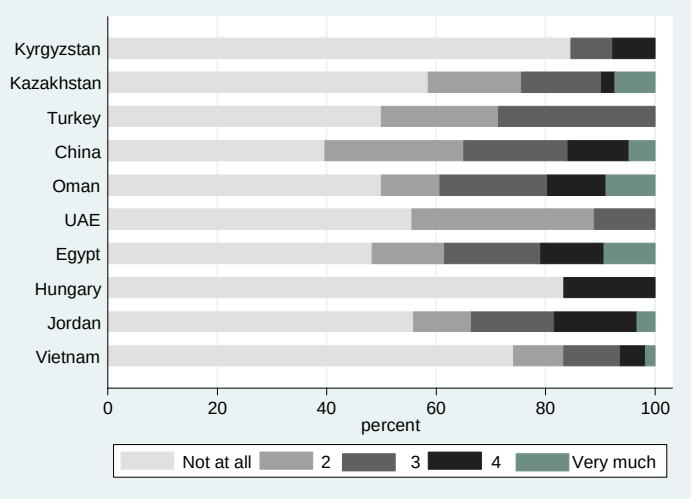


FIGURE 4: Family constraints (by country of location of the university)

4a:
My parents did not want me to go to Germany (*all respondents*)



4b:
My parents did not want me to go to Germany (*male respondents*)



4c:
My parents did not want me to go to Germany (female *respondents)*

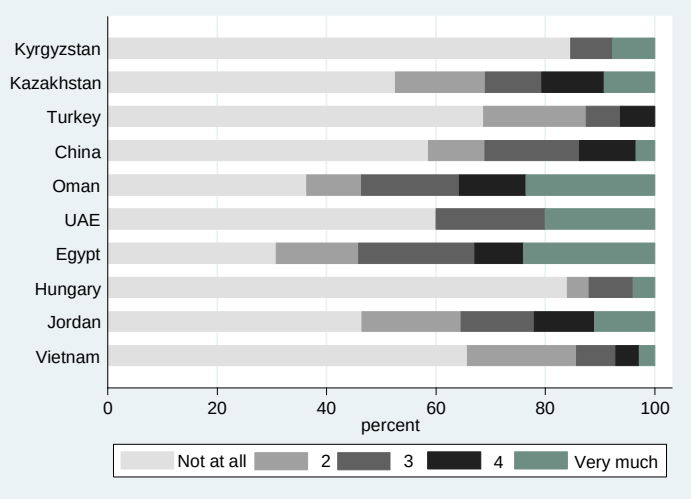
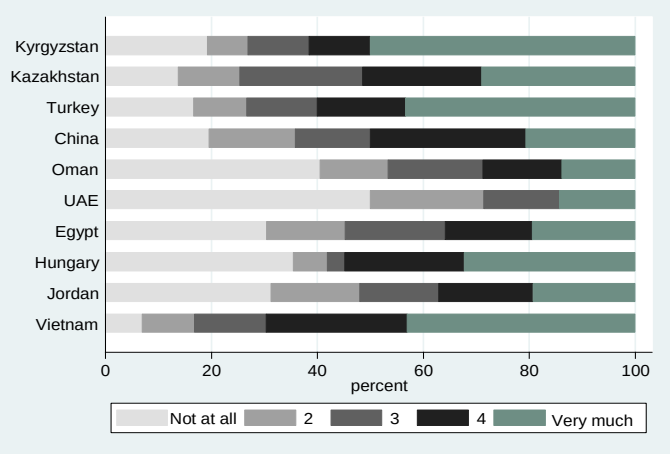


FIGURE 5: Other constraints (by country of location of the university)

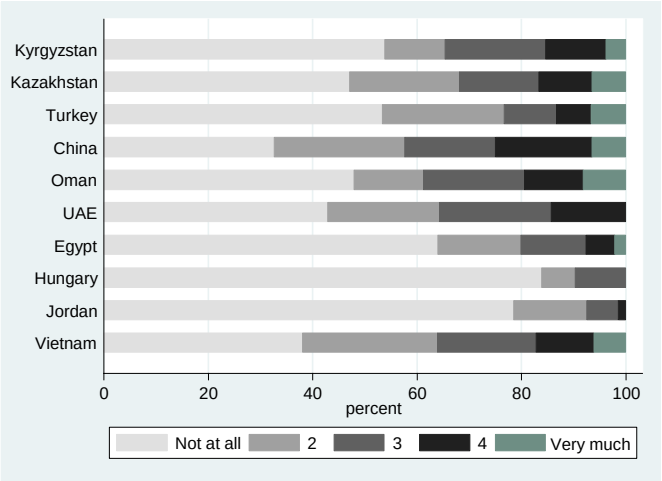
5a

I did not have enough money to go to Germany (*n*=1375)



5b

My marks were not high enough to study directly in Germany (*n*=1379)



5c

It was very difficult to go to Germany because of visa requirements (*n*=1380)

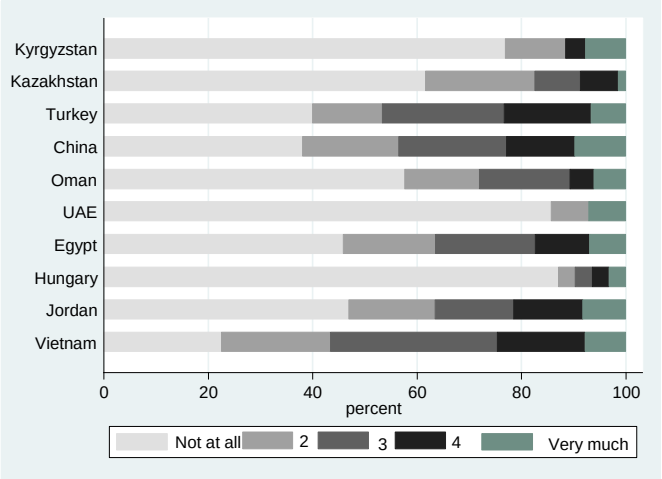
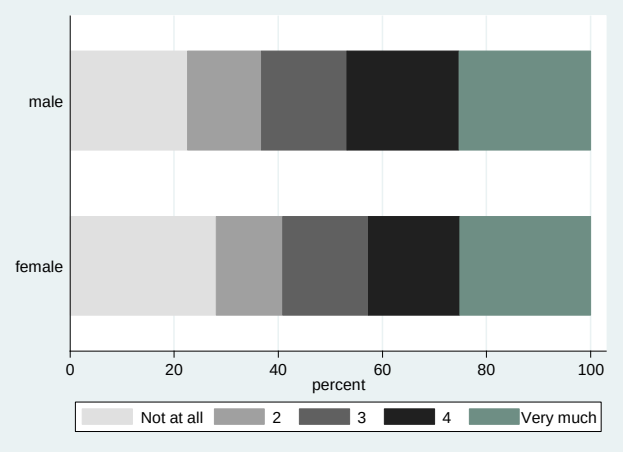
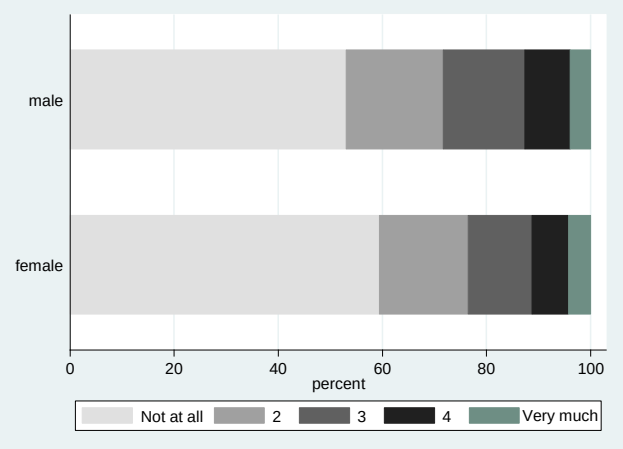


FIGURE 6: Other constraints (by gender)

6a
I did not have enough money to go to Germany (*n*=1375)



6b
My marks were not high enough to study directly in Germany (*n*=1379)



6c
It was very difficult to go to Germany because of visa requirements (*n*=1380)

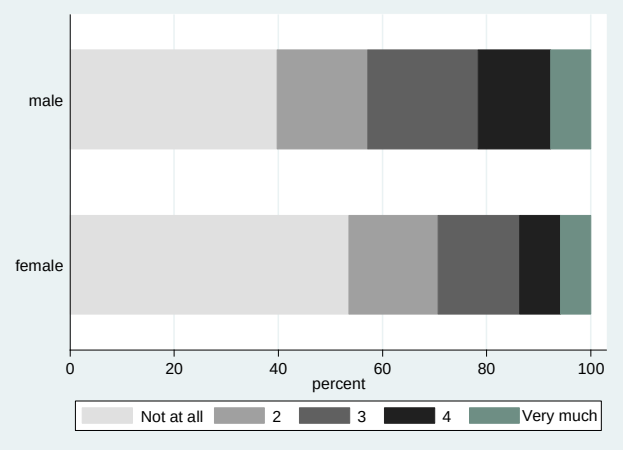


TABLE 5: Motivations for choosing German TNH

	AUB	CDHK	GJU	GKU	GUC	GUCL	GUtech	KSUCTA	TGU	TUB - Gouna	VGU
CHARACTERISTICS OF THE UNIVERSITY ATTENDED											
Relationship with Germany (153)	■	■	■	■	■	■	■	■	■	■	■
International character (98)	■	■	■	■	■	■	■		■	■	■
Better opportunities (53)	■	■	■	■	■		■	■	■	■	■
Possibility to do stays abroad (79)	■	■	■	■	■	■	■				■
Possibility to go abroad afterwards (57)	■	■	■	■	■		■	■	■		■
Optimal choice (60)	■	■	■	■	■	■	■			■	■
Learning a new language (9)					■	■		■	■		
Doing something new/Experience (25)	■	■	■		■	■	■			■	■
Prestige (17)	■	■	■		■		■				■
CHARACTERISTICS OF THE HIGHER EDUCATION SECTOR IN THE COUNTRY OF ORIGIN											
Poor quality (461)	■	■	■	■	■		■	■	■	■	■
Lack of security (10)		■	■		■		■				
Not “suited” for my social class (13)			■	■	■						■
Bad atmosphere/unclean (12)			■		■						
Overcrowded classrooms (11)			■		■						■
No research opportunities (2)					■					■	
Difficult access: high marks required (64)		■	■	■	■		■	■	■		■
Difficult access: high fees (14)		■	■	■	■		■				■
Difficult access: limited spots (14)		■	■	■	■		■				
Difficult access: secondary school not recognised (11)	■		■		■		■				
Political content of curriculum (4)											■
Gender issues (1)							■				
ACCIDENTAL FACTORS											
Subject available (101)	■	■	■	■	■	■	■		■	■	■
Scholarship available (18)		■	■	■	■		■				■
No choice: universities select (8)				■			■		■		■
Timing (12)			■	■	■		■				■
CONVENIENCE FACTORS											
Location (17)			■		■		■		■		■
Sparing time (1)										■	
Friends already enrolled/Fun (6)			■		■						
Easiness to change subject (1)					■						
OTHER											
Parents decided (6)			■				■				■
Sponsor decided (2)							■				
Recommendations (3)		■			■						■

CONCLUSION

For almost three decades, and in an increasingly important way, transnational higher education (TNHE), i.e. the cross-border mobility of educational programmes and institutions, has constituted a core aspect in the broader context of the internationalisation of higher education. Whether it is positively or negatively related to student mobility and skilled migration – or not connected at all – has been uncertain for a significant period of time. Existing literature has been characterised by a proliferation of conflicting hypotheses and empirical evidence is scarce.

This dissertation provided a contribution to this debate and took some steps towards an empirical exploration of this issue, which is important for both developing and developed countries. The former seek to educate and retain their citizens, whereas the latter are increasingly determined to attract and retain students and skilled workers from overseas. The thesis not only offers empirical evidence on a disputed topic, but also provides novel methodological insights, as well as original data that will be beneficial for future research. Furthermore, the results deliver valuable starting points for a wider theoretical engagement and reflection on the mobility and immobility of people, educational services and institutions. Finally, the results of this dissertation have clear and important policy implications.

In this concluding chapter, the theoretical reflections that are at the basis of this research are briefly mentioned. Afterwards, the empirical chapters that made up the thesis are summarised. The strengths and weaknesses of each chapter are presented, and numerous insights and ideas for future investigation are offered. The final part of these concluding remarks highlights the methodological and theoretical contributions of this dissertation, as well as the importance of the results from a policy point of view.

Theoretical premises

The considerations that follow constituted the cornerstone of this research initiative. The first one concerns the recognised importance of "transnational social spaces" (Faist, 2000), not only as a dimension which is worthy of investigation once migration has already taken place, but also as a fundamental aspect to be also scrutinised as a trigger and/or shaper of individuals' mobility (Raghuram, 2013). This leads to the hypothesis that the transnational supply of higher education, which entails the movement of

institutions and services, fosters the creation of new transnational social spaces, which may influence the mobility of individuals.

Moreover, one of the beliefs which influenced this research project is that the characteristics of the higher education sector play a fundamental role in determining who *wants*, *must* and/or *can* study abroad, as do the characteristics of the degrees delivered, which are fundamental, after graduation, in defining *who can work as a skilled worker* and *where*. In light of such considerations, TNHE becomes central to the development of a better understanding and analysis of the mobility of students and university graduates. This centrality seems to be inherent in the intriguing, on-going speculative debate on the relationship between TNHE and individuals' mobility, but the absence of empirical evidence requires new and original research efforts.

Another important reflection concerns the importance of framing the emergence, spread and consequences of TNHE in a broader context, which takes into account the divergent interests of states in the so-called on-going 'global competition for talent', the role of international organisations in disseminating ideas and influencing policies and the changes that have affected the meaning and the characteristics of higher education worldwide. One of the starting points of this thesis was, thus, the cognizance of the inextricable interrelation between migration and educational policies. This awareness moulded this investigation and its research questions and determined the interdisciplinary outlook followed.

Thesis summary and main results

As set out in the introduction, the core part of the thesis consists of the compilation of three independent, self-contained, research papers. Even though they are stand-alone articles, their underlying motivation is common and concerns the search for empirical evidence on the linkage between TNHE and international mobility of students and graduates. In this manuscript, the papers are chronologically presented in the order they have been carried out, so the reader can better understand the underlying rationale of the various steps of this investigation.

The question that initiated this research was: *Is there any relationship between TNHE and skilled migration into the country of the education provider?* Several scholars have theoretically speculated on the nature and sign of this relationship, but no empirical analysis had been ever conducted. The first empirical paper of this thesis, "**Transnational higher education and skilled migration: Evidence from Australia**",

presented in chapter 2, deals with exactly this interrogation. In order to answer this question, a panel data analysis was carried out using Australian macro data gathered from different sources and brought together into a single dataset. The results of the empirical analysis showed a positive and statistically significant association between skilled immigration to Australia and TNHE enrolment in Australian higher education in the preceding years. This link may indicate that TNHE facilitates the creation of ties with people from the country of the education provider and enables access to important information about that country which could facilitate migration. Furthermore, Australian degrees delivered through TNHE are recognised in Australia and this could pave the way to migration after graduation. Certainly, it is also possible that people enrol in TNHE in order to realise a previous desire to go to Australia afterwards. Even if this is the case, in light of such a result, claims that TNHE leads to the retention of people in the country where they study seem to be flawed.

The finding of this first paper opened another interesting question. The significance of the result can be interpreted differently depending on the extent to which TNHE is substituting student mobility. If TNHE is expanding recruitment, and not substituting student mobility, the result of this first paper implies that TNHE is increasing brain drain, because its graduates who move into Australia add to those who study directly in Australia and stay there afterwards. If TNHE is substituting student mobility, even if the relationship between TNHE and skilled mobility is positive, the result implies that TNHE is merely delaying emigration and/or it could reduce, to some extent, the brain drain which comes from student mobility. The result of the first paper, therefore, stimulated the questions of the second one: *Is TNHE a substitute of student mobility? To what extent are the macro determinants of international student mobility also related to enrolment in TNHE?* The second paper, "**Transnational higher education and international student mobility: Determinants and Linkage**", deals with these research questions. Even if some recent micro level studies have tried to better understand the motivations for choosing to study offshore (Leung and Waters, 2013; Li et al., 2013; McNamara and Knight, 2014; Pyvis and Chapman, 2005, 2007; Wilkins et al., 2012), they do not permit an assessment of whether, at a macro level, an increase of TNHE enrolment is associated with a decrease in the number of people who enrol directly in the country of the education provider (onshore). The only attempt to explore the issue from a macro level perspective (Tsiligiris, 2014) has been merely descriptive. The aim of the second research paper of this dissertation was, therefore, to explore the

macro determinants of the two types of enrolment and the linkage between them, taking into account other important contextual factors which could influence both. In order to achieve these goals, macro data on the Australian case have been gathered from different sources, brought together and a panel data analysis was conducted. The results showed that the macro determinants of international student mobility are also related to TNHE enrolment, albeit some of them with different signs or different intensity. Obstacles to mobility, such as needing a visa to enter Australia, for example, were found to be positively related with the number of people who seek Australian higher education offshore in their own country. An increase of unemployment in one country of origin is also related with an increase in the number of people who seek higher education directly in Australia and with a decrease in those who study Australian TNHE within their own country. This last result suggests that acquisition of a degree is not a unique determinant of student migration and seems to be in line with the "migration model" proposed by Rosenzweig (2006), according to which labour opportunities play a central role in driving student mobility and immobility. Regarding the linkage between TNHE and student mobility, a positive and statistically significant relation, albeit fairly weak, was found. The positive sign of linkage may indicate that the amount of people from one country enrolled in Australian TNHE increases visibility and heightens interest in onshore programmes and vice versa. The weakness of the linkage indicates that the different types of enrolment are absorbing different groups of students. Indeed, the opportunity given through the implementation of TNHE can awaken new interest and lead to enrolment from people who would have not considered foreign education were this opportunity not available. Moreover, if studying in the home campuses is considered more prestigious than studying offshore and/or if people study abroad in order to realise a migration project, people who have the opportunity to study abroad may do so despite the existence of TNHE. In this sense, the results might support the hypothesis put forward by Brooks and Waters (2011) about the emergence of a two-tier international higher education system in which student mobility can still be considered as a privilege and a more prestigious undertaking than studying offshore through TNHE. This therefore allows for the hypothesis that other factors, such as prestige, class, and gender, may be important in analysing the choices of students who enrol in international higher education. These are, however, issues that cannot be grasped with macro level data.

Providing macro level empirical evidence on an issue in which conjectures and postulations abound, these first two papers give a good sense of which of the proposed hypotheses and suppositions are worthy of further investigation. However, they do not allow for understanding what micro mechanisms are at stake from a micro level perspective. Thus, after having conducted two analyses at a macro level, the need to focus on the micro level became increasingly compelling. Thus, for the third part of this research, I decided to conduct a survey in order to give space to the "voice of the students" (Pyvis and Chapman, 2005: 40). The third paper, "**Trasnational higher education and student (im)mobilities**", is the first research paper presenting results coming from the analysis of new data I collected in 2014 among students enrolled in German TNHE in ten countries[38]. Using a mixed method approach, the paper analyses TNHE students' attitudes towards (im)mobility and, in light of these attitudes, explores the meanings students give to their enrolment. The analyses revealed that TNHE students cannot be considered as a monolithic group, but rather they have fairly heterogeneous motivations and attitudes. In particular, the results showed that, for some students, TNHE enrolment seems to be a way to overcome the limits (and perceived limits) of the higher education sector in the origin countries and that, in a few cases, TNHE can be a good way to avoid 'involuntary student mobility'. In the majority of cases, however, it seems that TNHE has been considered by the respondents as a "softer/safer mobility", a "trial run to mobility" and a way to acquire the resources needed to emigrate afterwards by those who wanted to go abroad but were not able to do it. The results also show that some of respondents who did not desire to study abroad experienced a sort of 'internationalisation of aspirations', which led to a desire to go abroad after graduation. Additionally, the paper provides various relevant insights that can act as a springboard for future research. For example, a gendered dimension of immobility emerged, which appears worthy of further investigation. The disaggregated information allows one to see how in some countries this gendered dimension is not as marked as in others. Some variations also emerge in the characteristics of the higher education sector in the countries of origin, variations which seem to have played a role in the decision-making. In some countries, social class and status also seem to be important factors. The exploration of the reasons behind these differences could not be pursued in the present paper, but is worthy of future attention. The third paper also

[38] Some additional information on the survey can be found in the general appendix included at the end of this dissertation.

shows a whole set of cases in which rational explanations for migration has its limitations. Indeed, the data clearly show how emotions, fears, and beliefs are crucial in students' decision-making. The active or passive influence of other actors, primarily parents, is also important.

The three papers that make up this thesis are not totally comparable. First of all, the first two papers are focused on Australian TNHE, whereas the third one concerns the case of German TNHE. Still, if we examine the strategic documents on higher education internationalisation issued by the major TNHE exporting countries (which include Australia and Germany), it is possible to note how these countries are moved by reasonably similar goals and rationales (Australian International Education Advisory Council, 2012; DAAD, 2014; HM Government, 2013). Nevertheless, in the future, it will be particularly relevant to look more in-depth at exporting countries' policies on the matter of TNHE as part of their 'war for talent' and to examine the strategies of higher education institutions that concern, for example, the choice of location, partners, and types of degrees and subjects offered, in order to systematically identify similarities and differences between exporting countries.

A second reason that makes comparison hard is that the first two papers approach the issue from a macro perspective, while the third one uses micro level information. They answer to questions of different natures, shedding light on the intersection between TNHE, skilled migration, and student mobility from different angles. Even though the three papers are not totally comparable, they are complementary, as they look at the same issue from different perspectives and through the lens of different empirical strategies, providing numerous fresh inputs for continuing and extending research on this understudied, controversial topic. The statistical analyses provided in the first two papers permit, for the first time, the quantification of the extent to which TNHE is related to the mobility of students and graduates. Thus, they allow for acquiring empirical evidence and testing some hypotheses that have been made but which have never been approached, to my knowledge. In doing so, they give an indication on which of the current theses that crowd the debates on TNHE and mobility are worthy of further examination. The combination of the results of the first two papers challenges the quite broadly held belief that the mobility of educational institutions and programmes through TNHE can be a substitute for student mobility and prevent brain drain. The mixed methodology used in the third paper enriches the analyses of the first two articles, because it provides opportunity for excavating students' attitudes, desires, constraints,

and motivations and for screening the deep complexity of students' subjectivities. The results of the third paper allow light to be shed on the motivations behind the choice of TNHE and the migration aspirations and capabilities of TNHE students, thereby offering fresh and new insights into literature on migration.

If we look at the results of the three papers together, it is possible to note how the results of the third paper confirm, to a certain degree, those of the first two papers. The third paper suggests that TNHE students either did not want to or, for different reasons (subjective or objective ones), could not study abroad. This means that they correspond to another segment of students than those in traditional degree student mobility. This result is in line with the results of the second paper. Furthermore, the majority of the surveyed students' desire to go abroad after graduation, and particularly to Germany, can be seen as a reflection of what was found in the first paper about the positive link between enrolment in TNHE and subsequent skilled migration to the country of the education provider. The second paper also showed how studying abroad is not only motivated by educational reasons; labour opportunities also matter. This is consistent with the findings of the third paper. However, the last paper highlighted that an exclusively economistic explanation of migration is insufficient. This is in part because not only rational motives, such as labour-related issues, are important for understanding student mobility. Other reasons related to values, internalised norms, etc. seem to be also important and should be taken into consideration when analysing student and skilled mobility. Some of these motives are probably connected to the "encultured knowledge" (Collins, 1993) that may vary between sending communities or countries. The panel structures of the datasets I used in the first two papers permitted controlling for these differences between countries, taking into account the unobservable heterogeneity between them. However, they did not allow for the identification of these kinds of factors or for the assessment of their importance. The third paper's mixed methods approach and micro perspective allowed for detecting some of these differences between countries, providing valuable insights that can feed future investigation. A deep and systematic exploration of these factors, focused on the differences and similarities between sending countries, is, however, left to future research.

Taken together, the results of the three empirical papers suggest that TNHE is expanding recruitment overall and not acting as substitute for mobility into the country of the TNHE providers. The results of the second paper suggest that the increase in

educational offers in one country does not automatically imply that people will stay in that country; rather, if it is not accompanied by more labour opportunities, an increase in the number of people who graduate can even lead to more student emigration. The findings also show that enrolment in TNHE often constitutes a stepping stone towards migration after graduation, acting as a trigger for new mobility aspirations or providing the resources needed to realise pre-existing migration projects.

Understandably, the research project is not exempt from shortcomings. However, in each chapter, the challenges that could not be overcome, if considered together with the results obtained, provide useful directions for future research.

Weaknesses and challenges for future research

The major weaknesses in the first two papers are related to shortcomings in the data. The first one concerns the fact that Australian data on TNHE enrolment are available only from 2002, so the time length considered for the analyses cannot be longer. Likewise, even though the case of Australia as a receiving country is highly relevant, the consideration of only one destination country obstructs the potential for generalisation of the results. Future research should test the results of this study with other important educational exporting countries. As a major exporting country of higher education, Australia is, to date, the only country to collect data on students enrolled in its TNHE programmes by citizenship, country of birth, country of campus location and country of students' permanent residence. Hopefully similar data will be produced in other national settings in the future. Data availability from different countries would also permit an accounting for multilateral resistance between alternative destinations (Beine et al., 2013). If more comprehensive data on the existing TNHE programmes and on when they have been implemented should become available in the future, it will be possible to test and corroborate the causal nature of the relationship between TNHE and skilled migration found in the first paper through the implementation of a Difference-in-Difference design, which would permit the exploration, in a more accurate way, of the counterfactual dimension.

Regarding the first paper, furthermore, it is possible that some students who obtain undergraduate education offshore may then move to Australia to attend postgraduate programmes there. This additional possible mechanism at stake could not have been taken into account due to the unavailability of data. Future research should consider this additional channel for ex-TNHE students to immigrate into Australia which could

signify a larger effect of enrolment in TNHE in future skilled migration flows. Related to this possible mechanism, the analysis conducted in the second paper could be improved in the future, when data will have been available for a longer period of time, enabling a dynamic panel analysis of enrolment in TNHE and international student mobility in order to check whether and how past values of these dependent variables are related with current ones.

A further aspect which should be further explored in order to better assess whether and why the two types of enrolment could potentially be considered as substitutes concerns the perceived prestige of TNHE programmes in comparison to those offered at home campuses. This aspect should be further examined in the future in the framework of micro level studies.

Another shortcoming, common to the first two papers, is related to the fact that Australia is an English-speaking country and this does not allow for the disentangling of the role language plays as a determinant of student and skilled migration. Even if TNHE has been almost exclusively Anglophone to date, a valuable venue for future research must surely concerns the consideration of non-English speaking countries. Among the reasons why I selected Germany as the case of study for my third paper is the consideration of this issue.

On this linguistic dimension of TNHE, future research may also want to analyse in a more in-depth way the possible 'dilemma' experienced by non-Anglophone countries and their universities, which aim to offer programmes in English to be able to attract more students, while simultaneously aiming to promote their national languages. The French and German cases are very interesting in this sense. Future research could be conducted in order to analyse and compare the attitudes, rationale and positioning of French and German stakeholders (universities, governments, CampusFrance, DAAD, etc.) towards this controversial issue, taking into account the goals pursued and the potential trade-off of the different policies considered and implemented.

Regarding the third paper, future research could be carried out following several directions in order to overcome its shortcomings. First of all, it should be remarked that, even though the case of Germany as an education provider country is highly relevant and well-suited for the exploration of some particular features (such as the language one), the consideration of only one case limits the generalizability of the findings. Further investigation should be conducted among students enrolled in TNHE from other countries in order to capture similarities and differences. Moreover, German TNHE was

not so suitable with regard to students who move to another country in order to acquire TNHE. Very few respondents to the survey are real 'mobile students', so they could not be considered separately.

Another weakness of the study is related to the probable post-rationalisation mechanisms which could be at stake. Despite this, as already pointed out by Shewel (2015), post-rationalisation mechanisms do not explain why students, who reported similar capability limitations, could display such heterogeneous attitudes towards mobility and the exploration of these differences is anyhow pertinent and stimulating. The paper already describes in a careful manner these different attitudes. The exploitation of the data on personality traits collected in the framework of the survey could be a way to further explore these differences[39].

Another fruitful direction for future research could be the comparison of the data collected through my survey among students enrolled in German TNHE with those collected by the *Sozialerhebung des Deutschen Studentenwerks* among international students who study directly in Germany in order to statistically analyse differences and similarities between the two groups, which share the choice of German higher education, but differ in the mode of attendance and migration status. Moreover, in the future, the survey could potentially be expanded through the inclusion of students enrolled in other local universities. The future provision of studies that compare TNHE students with those enrolled in national and overseas universities seems fundamental.

As already pointed out, the results of the third paper suggest that several respondents experienced an 'internationalisation of aspirations' which leads them to desire to go abroad after graduation. Future investigation is needed to verify whether these migration aspirations will be satisfied. The implementation of panel surveys could be a way to deal with this research goal. The *HIS-Absolventenpanel,* which has been implemented in Germany since 2002/2003 (second wave collected in 2006/2007) among tertiary graduates of German higher education institutions in Germany, could be, in this sense, a stimulating source of inspiration.

Two further elements that emerged from the analyses are worthy of further investigation: one concerns a gendered dimension of student immobility; another is the question of class. These aspects were beyond the goals of this dissertation, but they surely constitute very relevant and intriguing directions for future research and could be

[39] The survey includes one section on personality traits. The instrument used is the TIPI, provided by Gosling et al. (2003). It is about a 10-item measure of the Big-Five personality dimensions.

deepened through in-depth interviews. Another element which leaks out from some responses concerns the occasionally "involuntary" character of student mobility. Future research should devote more attention to this fairly unknown phenomenon in order to capture its extension and the potentialities of TNHE in avoiding it. The importance of these kinds of issues possibly varies between different countries of origin of the students. Because the present research focused on other issues, it could not adequately highlight the importance of individual national contexts; this constitutes one shortcoming of the present work. Future in-depth case studies in different countries where TNHE is implemented could – and should – shed light on these differences.

Another interesting aspect that should be taken into account by future research is the mobility of academic and administrative staff. It could be that different types of TNHE (franchising programmes, branch campuses, bilateral universities, etc.) are related differently to future mobility. This should also be explored further. Lastly, the whole thesis focused on TNHE, but future studies may also want to consider transnational vocational education and training (VET).

Thesis contribution

Despite these limitations, this dissertation contributes to existing literature from both a methodological and a theoretical perspective. Furthermore, its results are relevant and have important implications from a policy point of view.

Methodological strengths

From a methodological perspective, each of the research papers that made up this thesis contributes to existing research in several ways, presenting some strong, noteworthy points. The methodological strengths of each paper are presented below.

The first paper is, to the best of my knowledge, the first study which provides empirical evidence of the relationship between TNHE and skilled mobility. The introduction of a variable measuring enrolment in TNHE in modelling skilled migration using macro data constitutes its main contribution. The major strengths of the paper are connected with the choice of the data and the methodology used. Indeed, the data used allowed an accurate measurement of skilled immigration. Taking into account only visas granted offshore, the data allow the exclusion of skilled immigrants who studied tertiary education directly in Australia. Furthermore, compared with data coming from Census data, normally used in migration research, information on visas granted assures

more accuracy regarding the year of entry of the individuals counted. They also allowed the exclusion of some categories of skilled visas which constitute unusual pathways to skilled migration, such as the "Distinguish Talent visas", granted to the world's foremost sportsmen, artists, etc., which do not necessarily require a tertiary education degree. The analysis conducted took into account all the economic, demographic, legal and contextual factors, identified by previous research which could influence skilled migration. The panel structure of the dataset made it possible to account for all the time-invariant characteristics of one country of origin which can influence both enrolment in Australian TNHE and skilled migration into Australia (e.g. distance, historical and economic strong relationships between the country of origin and Australia, the Australian recognition of degrees from a particular country, a particularly welcoming attitude from Australia towards skilled immigrants from a specific country, etc.). Time fixed effects also allowed controlling for the specificity of a particular year, taking into account, for example, the global economic situation. As the analysis exclusively concerns migration into one country (Australia), these particular types of fixed effects also controlled for Australian changes in immigration policies and regulations towards skilled migrants.

The second paper offers a unique analysis of the relationship between TNHE enrolment and student mobility which goes beyond the mere description of the trends of both types of enrolment. The empirical analysis provided has some notable strengths. Firstly, it takes into account the relevant factors which could influence both types of enrolment. Secondly, it uses a methodology that deals with the potential simultaneity bias which, if not considered, could result in spurious correlations. Thirdly, the combination of the criteria of citizenship and of country of permanent residence of the students provides a fairly accurate measure of student mobility. Finally, TNHE enrolment in the students' home country, which does not imply any mobility, and TNHE in a third country, which can be considered a novel form of student mobility, are considered separately.

The third paper offers an in-depth examination of TNHE students' attitudes towards international mobility, constituting, to my knowledge, the first existing attempt to deal specifically with this issue. The results come from the analysis of original data collected through a survey conducted in eleven German TNHE programmes in ten countries. These data constitute a rich source of original information which can be used also for future research purposes. The survey implementation design assured that all the students

enrolled in the targeted programmes had been reached[40] and that nobody else could enter the survey. This represents a significant point of strength compared with previous research conducted among TNHE students. The mixed method approach and the theoretical framework used allowed for a better understanding of the intricate mixture of attitudes that characterise students' decision-making and their sometimes contradictory feelings towards international mobility. This sheds light on a range of new topics and provides meaningful insights that can contribute to both future research on TNHE and research on international student mobility.

The empirical analysis of the relationship between enrolment in TNHE and skilled mobility as well as the results of the third paper reveal the need to consider the existence and importance of TNHE when analysing skilled mobility. TNHE seems crucial in reducing the costs of migration, but it can also constitute a "push" factor that triggers and shapes new migration. In the future, migration scholars should take these mechanisms into consideration further. The failure to consider TNHE when modelling skilled migration could result, in some cases, in an omitted-variable bias.

In summary, this dissertation provides a number of methodologically useful insights. It contains original ideas on the possible use of existing datasets that have not yet been exploited, such as the data on enrolment in Australian higher education or the data on visas granted. It also demonstrates how other disciplines can be a source of inspiration in order to overcome methodological challenges. Finally, it makes available a new original dataset that could be used for the pursuit of further research goals.

Theoretical considerations

As been discussed, this dissertation takes some important steps towards the empirical identification and the assessment of the relationship between TNHE and the mobility of students and skilled individuals. Beyond that, it demonstrates how merging the three phenomena in the same analytical framework can make a contribution towards a broader understanding of mobility, thus offering another opportunity for rewarding reflection on the significance and meaning of TNHE. The theoretical contribution of the thesis can be condensed into some core thoughts that stimulate theoretical speculation. It also provides a number of questions that may be of interest to future research.

[40] There are, however, a few exceptions. For more information on the survey, see Chapter 4 and the general appendix.

One of the key messages that arise from this research is that "the acquisition of knowledge" is often a means, not just an end. As was already pointed out by past research (Brooks and Waters, 2011; Raghuram, 2013; Rosenzweig, 2006), the results of this dissertation indeed also show that the attainment of a higher education degree is neither the sole nor always the primary driver of student mobility. First of all, the acquisition of higher education cannot be separated from career aspirations and plans. In this sense, labour opportunities also play a central role when choosing where to study (Hashim, 2007; Marginson, 2006; Rosenzweig, 2006). The lack of employment opportunities in one country could mean that students study abroad in order to find a job in the destination country afterwards. Furthermore, the search for competitiveness in the labour market also implies a quest for "distinction", which can be at the base of choosing a particular higher education institution and an international higher degree. The results also confirm that, as put forwards by Brooks and Waters (2011), the choice of a place to study and of a particular institution is also often related to other factors, for example the need to gain autonomy or the leisure dimension – such as the search for fun and new experiences or the desire to travel. This means that, even though the "acquisition of knowledge" remains the core distinctiveness of student mobility (Raghuram, 2013), it should not be disentangled from other non-educational (economic and experiential, rational and emotional) factors that are embedded in the "study-abroad experience". Furthermore, other agents, such as parents and sponsors, are often crucial in influencing and determining mobility choices. All this suggests that only a holistic approach that takes into account these different aspects can deeply scrutinise and theorise student mobility.

Theories that hypothesise that TNHE can be a substitute for student mobility appear to look at the issue exclusively from a narrow consumer choice perspective. They also seem to assume that a degree acquired onshore could be perceived by potential students as equivalent to one acquired offshore. Nonetheless, even though the two types of enrolment have the pursuit of an international degree in common and might be considered as comparable in educational terms, they do not entail the same variety of experiences and do not open up the same range of opportunities. As the results of this dissertation suggest, the two types of enrolment attract and/or absorb two different types of students that may differ in their aspirations and plans and/or in their capacity to realise a migration. A systematic comparison of the two groups should be pursued by future research. The dissertation lets one glimpse how the differences between the two

groups often lie in the capability to go abroad. As showed by the third paper of this dissertation, for many students, TNHE becomes a way to gain the resources and skills needed to go abroad. This demonstrates how, in the context of the "knowledge economy", in which knowledge becomes a key criterion for migrants' selection, higher education can become "a pre-condition for travelling" (Raghuram, 2013: 141). Thus, migration can become the determinant for the acquisition of a particular type of knowledge.

Considering this, TNHE seems to own an enabling potential that should be explored further. Nevertheless, according to Brooks and Waters (2011), it seems that we are about to observe the emergence of a stratified scenario of international higher education, in which higher education on home campuses is still perceived as more beneficial – for future career opportunities and migration prospects. On-campus education is thus often preferred, and enrolment in TNHE often constitutes a second-option. The results of this thesis seem to support this hypothesis. Research on social stratification in higher education has a lot to bring to this debate. To what extent is TNHE an integral part of socially stratified higher education systems? How does offshore and onshore enrolment intersect with the "social axes of power" (King and Raghuram, 2013: 131), such as class, gender and ethnicity? Is TNHE a means to social mobility or a reflection of "persistent inequalities" (Shavit and Blossfeld, 1993)?

Some results of this thesis also suggest that TNHE can be a way for a nascent middle class to pursue distinction and status. In this context, "symbolic power" (Bourdieu, 1975) and subjective perceptions of higher education quality and prestige also play an important role. Perceptions clearly do not develop in a vacuum but may respond to practices enacted by higher education institutions and countries to compete in the global higher education market, with particular regard to benchmarking and standardised ways to evaluate quality. This makes clear how in order to understand student and skilled mobility one cannot neglect the current changes affecting the higher education sector. What role do the marketization and internationalisation of higher education have in influencing the perception of what a "quality education" is or in diffusing globalising standards and imperatives? What role do they play in diffusing the idea of the positive value of international mobility? Does enrolment in TNHE influence the individuals' perception of "places" (i.e. one's origin country, the country of the education provider, the "global arena")?

This research suggests that enrolment in TNHE, and the related experiences, are related to the attitudes which TNHE students hold towards skilled mobility, sometimes triggering new mobility aspirations and/or shaping the directions of existing ones. To what extent and in which ways is the mobility of education services explicitly considered by education exporting governments as a practice enacted to influence conduct and make migration desirable for a specific target group? Unquestionably, individuals are not passive recipients; rather, they are fundamental "agents of knowledge formation" (Madge et al., 2014). Hence: in which ways do students interact with the knowledge they receive through TNHE?

This dissertation highlights the unique contribution that research on TNHE can give to the literature on individuals' mobility. TNHE institutions and programmes can be considered as examples of those "middle places brokering mobility" defined by Raghuram (2013: 145). TNHE is a "middle place" in several ways. First of all, inserted into broader global circuits and processes, TNHE can be conceptually situated at the intersection between countries' education and migration policies, higher education institutions' strategies, and individual decision-making. Also, in TNHE, "global", "national", and "local" converge and interact. It therefore becomes an advantaged lookout point to explore the intricate mechanisms of production, validation, and circulation of knowledge. Secondly, TNHE is concretely often a stepping stone towards mobility, being an integral part of a "stepwise" (Paul, 2011) strategy to migrate to a desired destination. In this sense, TNHE enrolment can also be considered as a "temporal in-between" devoted to the acquisition of the skills needed to become mobile. This kind of dynamic challenges the common dichotomy between sending and receiving countries, complicating the application, and showing the shortcomings, of the traditional "push-pull" and "retain-repel" (Arango, 2000) models. Theories that take into account this geographical and temporal multidimensionality of mobility decisions are urgently needed. This will surely be an important challenge for migration researchers in the following years.

According to De Jong and Gardner (1981), the difficulty in explaining migration can be attributed to the scarcity in migration studies of questions about why people do not move. In this regard, TNHE also constitutes an advantageous avenue to follow. Indeed, it can undeniably be imagined conceptually as an in-between that simultaneously contains mobility and immobility. TNHE also often occupies a "space of compromise", between exclusion and inclusion, between internal aspirations and external constraints,

between ambition and fear, between rational motives and emotions, between one's own desires and those of significant others. Therefore, its exploration has a lot to bring to literature on mobility, showing the high complexity of mobility and immobility decisions.

The integration of TNHE, student mobility, and skilled migration in the same analytical and theoretical frame is still at an initial stage, but it very much can and should be explored. This thesis demonstrated how this frame is a pertinent and promising way forward.

Policy relevance

The results of this dissertation have important policy implications. They suggest that there is a positive relationship between TNHE and skilled migration and that TNHE is not a substitute for international student mobility. They also further indicate that because labour opportunities also play an important role in explaining mobility or immobility decisions, the expansion of the higher education supply in one country by itself does not appear to be a sufficient strategy for retaining students. Some results of this dissertation show that enrolment in TNHE can effectively overcome the limitations – and perceived limitations – of the domestic higher education system. Nonetheless, the results also suggest, how, in some cases, TNHE enrolment instigates and/or shapes international mobility.

Although TNHE is often presented as a means to achieve a win-win situation beneficial for all the stakeholders involved, in light of these results, it is rather revealed to be a potentially efficient tool for education exporting countries to reach more foreign students and awaken the interest of, actively attract, and/or facilitate the mobility of young foreign skilled individuals. This should be critically considered by countries that open their education market to foreign providers with the expectation of preventing their students to go abroad and reducing brain drain. In some countries, the exodus of skilled individuals has been so extreme that the ILO (International Labour Organisation, 2006: 30) has urgently recommended that developed countries "establish guidelines for ethical recruitment". In the coming years, it will be relevant to determine whether and to what extent TNHE is considered by education exporting countries as a soft strategy to influence the mobility aspirations of students and garner the desired "knowledge migration" (Findlay, 2011: 162), while avoiding more explicit, and potentially more criticised active conscription schemes.

The results of the third paper show that TNHE can have an emancipatory effect of sorts. This suggests that, quite often, enrolment in TNHE provides people with mobility capital (Kaufmann et al., 2004) that they did not have before enrolment and which they may not have accumulated if TNHE had not become available. However, this mobility capital, collected through TNHE, may not be equivalent to that collected by those who study an entire degree abroad. Ziguras and Law (2006) pointed out, for example, that former students of Australian TNHE receive fewer points in the admission system than those who study directly in Australia.

This discrepancy leads to another relevant reflection that concerns the power destination countries have in ultimately deciding, through their admission schemes, who can enter and settle in the country and who cannot, regardless of what individuals' prefer or want. Through their TNHE offer, countries can stimulate interest in, and foster attachment to themselves, while lowering the migration costs of a particularly young and welcome category of migrants. According to their interests, countries can change their immigration schemes to facilitate the immigration of some migrants and hinder that of others, picking from a larger pool of potential skilled migrants. Some of the survey participants actively "worked" on their mobility capital (Kaufmann et al., 2004) to realise their aspirations to migrate and others experienced a sort of "internationalisation of aspirations". However, whether they will realise these aspirations or not will depend on the decision of immigration officers and, ultimately, on the needs of the labour market in the destination country. In this sense, developed countries appear to continue to be in an advantaged position.

According to Sidhu (2007), the capacity-building thematic has been brought into the forums on trade liberalisation of higher education to promote the neoliberal agenda and legitimise trade liberalisation as a new "developmental tool" both within developing and developed countries. The results of this dissertation seem to indicate that, even if TNHE can have some beneficial outcomes, its development promises for all are not self-evident. The issue should therefore be investigated further and examined critically, and it should become the object of urgent public policy debate.

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GENERAL APPENDIX: THE SURVEY

"German transnational higher education: Views and Motivations of its students"

Goals

The main goal of the survey "German transnational higher education: Views and Motivations of its students" is to build upon earlier research on student mobility and enrolment in TNHE by providing new insight into the phenomenon of student mobility and TNHE.

In particular, it seeks to:

- Provide exhaustive data collected among people enrolled in TNHE.
- Identify differences and similarities between international mobile students and students studying TNHE, taking into particular account individual level, households' characteristics and personalities' attributes.
- Identify differences and similarities between TNHE students who enrol in their own country of origin and TNHE students who enrol in a third country.
- Investigate the attitudes of TNHE students towards student mobility and enrolment in home countries' higher education institutions, taking into particular consideration the aspiration and the capability to study abroad.
- Investigate the attitudes of TNHE students towards future migration taking into particular consideration aspirations and expectations.

Questionnaire Design

The questionnaire has been designed after a thorough search and analysis of the relevant literature on TNHE and student mobility. Contacts with key stakeholders (DAAD-representatives, representatives of German universities engaged in TNHE, DAAD-*Lektoren*) have been established in order to gather practical expert insights on the phenomenon.

Some of the questions have been derived from the questionnaire focused on international students[41] of the 20th Social Survey of the German *Studentenwerk*[42] (DSW) conducted by the *HIS-Institut für Hochschulforschung* (HIS-HF). This survey has been conducted among international students since 1997 (the 17th edition of the Social Survey of DSW).

[41] In Germany they are called *Bildungsausländer*, i.e. students born in foreign countries with a foreign secondary school leaving certificate. In English, they are referred to as 'international students'. They should be distinguished from *Bildunginländer* who are students born in foreign countries who acquired the secondary school leaving certificate in Germany. This latter group often includes children of migrants who enter Germany because the parents migrated into Germany. In literature on student mobility in English language, both groups are normally referred to as 'foreign students'.

[42] In German: *20. Sozialerhebung des Deutschen Studentenwerks*. More information available online at: http://www.sozialerhebung.de/erhebung_20/ (last accessed Mar. 10, 2015).

The derivation of some questions from that questionnaire does not only assure their validity, but it also, and most importantly, guarantees the comparability between the two datasets. Thus, the data obtained from the present survey on students enrolled in German TNHE can be easily compared with the data on international students who study directly in Germany. This allows, for the first time, a systematic investigation into the differences and similarities between traditional mobile students and students enrolled "transnationally". The two groups of students have indeed in common the choice of a foreign higher education, but they differ in the mode of attendance and in their migration status.

The final questionnaire is made up by the following sections:

a. DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS
b. CURRENT STUDIES AND PREVIOUS EDUCATION
c. DECISION-MAKING PROCESS, ASPIRATION AND CAPABILITIES TO MIGRATE TO STUDY ABROAD
d. PLANS AFTER GRADUATION
e. LANGUAGES
f. PERSONALITY TRAITS

The questionnaire benefited from expert advice and useful feedback from colleagues and survey-design experts of the Research and Expertise Centre for Survey Methodology (RECSIM)[43] of the Universitat Pompeu Fabra. Subsequently, it was firstly pretested among postgraduate students from different origins of the Universitat Pompeu Fabra in order to check the clarity of the questions among university students who speak English as a foreign language (as it is the case for the survey target group). The pretest provided some useful feedback for improving several questions that could have been more clearly phrased.

A small pilot study was conducted in May 2014 in order to check for the feasibility of the study. The idea was to conduct the survey among a small number of people who are drawn from the population of interest. The pilot was thus conducted among the students enrolled at the Kyrgyz-German Faculty for Informatics in Bishkek (Kyrgyzstan). This is a TNHE project conducted by the German University of Applied Science in Zwickau in cooperation with the Kyrgyz State University of Construction, Transport and Architecture (KSUCTA). The scope of the pilot study was essentially to prove the feasibility of the study and its procedures and to check for the reliability of some scales. In particular, the pilot was used to check for the reliability of the scales taken from the *20. Sozialerhebung.* Even if largely used by HIS, it was important to check for their internal consistency for the population of my interest.

[43] The author is especially grateful to Melanie Revilla for her advice, support and for kindly making herself always available.

Universities selected

Due to the particularly strong inclination of German TNHE for the establishment of "bi-national universities", the aim was to include a significant number of universities of this kind in the study. All existing German-backed universities were first contacted between December 2013 and April 2014 to ask for cooperation in the conduction of the survey.

The survey was conducted in all existing German-backed universities, except the Lebanese German University (LGU[44]) and the Wadi International University (WIU[45]). It was also carried out among students enrolled at the Chinese German College of Postgraduate Studies (CDHK), at German-UAE College of Logistics (GULC) and at the branch campus of the Technische Universität Berlin in Egypt (TUB-El Gouna).

The representatives of the Technische Universität München in Singapore (TUM-Asia) did not agree to cooperate because they did not want to overload their students by asking them to answer surveys. The Friedrich-Alexander-Universität Erlangen in South-Korea (FAU-Busan) could not be contacted because of time constraints, whereas the Swiss-German University (SGU) was explicitly excluded because it is questionable to view it as a German TNHE venture.

In the case of the German University Cairo (GUC), a cooperative attitude was shown by the GUC German Office, whereas the Egyptian counterpart was reluctant to cooperate for unknown reasons. Thus, the survey among GUC students was conducted with the sole support of the GUC German Office at the University of Ulm and with the help of some teaching assistants working at GUC in Egypt. The link to the survey was also spread through private messages personally sent to current GUC students belonging to the closed Facebook group "German University Cairo (GUC)". This is the only case where the survey was spread through snowball sampling. Otherwise, the survey was carried out in cooperation with the universities and the link was spread through private e-mails sent by the universities to all students enrolled. Even though the sampling strategies used have differences, it seemed fundamental to include GUC in the study considering the large number of students enrolled in this university.

Conducting the survey

The survey has been conducted with particular focus on the scientific nature of the procedures, the voluntary nature of participation and the anonymity of the data collected.

In order to guarantee the anonymity of the respondents, but also to reach all students enrolled while avoiding sample selection, the survey has been conducted in cooperation with the universities. The collaborating universities helped with the implementation of

[44] After an initial acceptance by the LGU's representative, it was very difficult to cooperate due to difficulties of communication with them and their low propensity to collaborate.
[45] A cooperation agreement with the WIU was signed but the delicate political situation in Syria made it impossible to conduct the study among the students at WIU.

the survey in two ways. Firstly, they have been in charge of sharing some basic descriptive information regarding their students (number of students enrolled by gender, nationality, level and field of study). This information is fundamental in order to assess the representativeness of the responses obtained and to have the possibility to add weights to the data gathered. Then, they sent all their students an e-mail with an invitation and a link to the online survey, resending a few (from 2 to 4) periodical reminders.

The survey period started at the end of May 2014 and ended in October 2014.

The survey was sent to all the enrolled students, except in two cases: the above mentioned GUC case and in the case of the Andrassy University Budapest (AUB). At AUB, the survey was not sent to the 40 PhD students enrolled.

The students received an e-mail with the invitation letter and the link to the survey, which was elaborated using Qualtrics. The survey settings allowed the participant to start the survey and come back to it at another time. They were also free to backtrack and revise all their responses before submitting the questionnaire. Where possible, answer categories were randomised to reduce potential response bias.

The language of the questionnaire was English. Where explicitly requested by the university, a translation of the questionnaire into a second language was provided together with the original English version in order to facilitate the comprehension of the questions by the students. This was the case of the German Kazakh University (GKU) where the questionnaire was provided in English and Russian and of the Turkish German University (TGU) and the CDHK where the questionnaire was provided in English and German.

The participants were also asked for permission to be contacted in the future for the realisation of a qualitative study and, where consent was received, to leave an e-mail address[46]. The provision of this information was completely free.

The participant could also leave any additional comments at the end of the questionnaire.

Limits and benefits of the survey

It must be pointed out that the data obtained from the survey aimed not at being representative of all students in European transnational education programmes. They exclusively concern students enrolled in German TNHE. Nonetheless, the information provided by the cooperating universities gives the unique opportunity to assess to what extent the data are representative.

[46] In the case of GULC, the questions related to it were deleted because the Ethical Committee of the university did not allow for this.

The data collected allow for a systematic comparison of students enrolled in German higher education offshore with those enrolled onshore and for in-depth examination of their attitudes towards national higher education in their country of origin and towards student mobility as well as towards an emigration to study and work abroad after graduation. Hence, a clear benefit of this research is the provision of data on students enrolled in German TNHE that will allow a clarification and better understanding of their motivations, aspirations and decision-making.

A second contribution concerns the provision of data which are comparable with those collected among international students in Germany which will give unique opportunities to compare these two types of international students, thereby allowing a better understanding of the phenomenon of TNHE and of its potentialities.

Finally, 1075 respondents left an e-mail address and consented to be contacted for future qualitative studies. The realisation of a follow-up qualitative study and in-depth interviews can definitely complement and enrich in a unique way the results obtained through the survey.