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# Non-EU International Students in UK Higher Education Institutions: Prosperity, Stagnation and Institutional Hierarchies

José Luis Mateos-González Department of Sociology, Durham University

A thesis submitted to Durham University for the degree of Doctor of Philosophy

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To my mum –her unconditional support has made this thesis possible. *A mi madre, cuyo apoyo incondicional ha hecho de esta tesis una realidad.* To my dad –I will always miss him. *A mi padre, a quien siempre echaré de menos.* 

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#### Abstract

This thesis investigates the relationship between the distribution of non-European Union (EU) international students across the UK higher education sector and the characteristics of UK higher education institutions (HEIs) and the strategies they may pursue to make their provision more attractive to non-European Union (EU) international students. It looks at how this relationship has evolved since 1995/96, analysing the recruitment patterns of individual HEIs in relation to policy changes that may impact the number of students coming to UK higher education from outside the EU. To do so, I analyse an exceptionally large dataset, produced by UK's Higher Education Statistics Agency (HESA), containing information on over 35 million higher education students covering a 22-year period. This study represents the first systematic longitudinal analysis of recruitment patterns of non-EU international students in UK HEIs for the past two decades.

My analysis shows that UK institutional hierarchies play a pivotal in explaining the uneven distribution of non-EU internationals students across HEIs, particularly in policy environments that seek to restrict mobility. Understanding this unevenness is critical considering the terms in which non-EU international students are recruited in UK higher education. This subset of students represents a substantial resource –both financial and symbolic– in the sector, as they tend to pay higher fees than their domestic counterparts and are perceived as a marker of institutional prestige, as attested in some global league tables. Thus, the observed inequalities between institutions in terms of their shares of students who are non-EU international –with more prestigious HEIs overwhelmingly having higher shares– contribute to longstanding resource and prestige disparities in UK higher education.

Moreover, this thesis investigates whether the position of universities within UK institutional hierarchies allows us to understand the strategies HEIs pursue to make their provision more attractive to non-EU international students. Drawing from the Bourdieusian concept of 'field of power' (1993) and its development by Marginson (2008), I argue that the position of a given

university in a hierarchy will shape their 'space of possibles' (Bourdieu 1993: 30; Marginson 2008: 307), that is the strategies that they may follow to successfully recruit non-EU international students. Previous research suggests that universities that recruit non-EU international students as a result of marketising their educational offering to a global audience, pitch their products to particularly lucrative markets, which results in certain institutions having particularly high concentrations of certain nationalities in certain subjects (Findlay et al. 2017). However, as I show in this thesis, the extent to which HEIs engage in these practices vary depending on their position in UK's institutional hierarchy.

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When I started this journey in 2015, I never would have thought that doing a PhD would be such a challenging job. It has been an incredibly humbling yet stimulating experience and it would not have been possible without the pastoral and intellectual support of my supervisor, colleagues, family and friends. I also owe thanks to the ESRC –and the British taxpayer– for funding this research.

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#### Introduction

#### 1. Introduction

This thesis investigates the relationship between the distribution of non-European Union (EU) international students across the UK higher education sector and the characteristics of UK higher education institutions (HEIs) and the strategies they may pursue to make their provision more attractive to non-European Union (EU) international students. It looks at how this relationship has evolved since 1995/96, analysing the recruitment patterns of individual HEIs in relation to policy changes that may impact the number of students coming to UK higher education from outside the EU. As I show empirically in chapter 2, the numbers of non-EU international students entering UK higher education have undergone intermittent periods of growth –between 1999/00 and 2003/04, and between 2007/08 and 2010/11- and of stagnation -between 2003/04 and 2007/08, and between 2010/11 and 2016/17. These periods coincide with UK policy environments seeking to facilitate or restrict student mobility to the UK, and political and socioeconomic changes elsewhere. In particular, the policies implemented by the Conservative-led coalition government elected in 2010 and the 2015 Conservative majority government pursuing the reduction of net migration appears to have had a detrimental effect on these numbers. This thesis also explores whether the strategies HEIs may pursue to recruit higher levels of non-EU international students vary depending on the characteristics of HEIs. To my knowledge, this thesis presents the first comprehensive empirical study of recruitment patterns of non-EU international students across UK HEIs for the last two decades, and the institutional factors that may explain these patterns at all levels of study: undergraduate, postgraduate taught and postgraduate research. To do so, I have analysed an exceptionally large dataset produced by UK's Higher Education Statistics Agency (HESA), an organisation in charge of collecting administrative data about UK

higher education. This dataset contains information on over 35 million higher education students from all domiciles –including almost 4 million non-EU international students– covering a 22-year period starting in 1995/96, when HESA started collecting data on UK higher education<sup>1</sup>.

The empirical focus of this thesis are UK HEIs for which census-like data is collected, that is all publicly funded universities and other higher education institutions, and the privately funded University of Buckingham (HESA 2019b). Specifically, I look at the distribution of non-EU international students across these HEIs. In this thesis, non-EU international students are regarded as those students coming to UK higher education to pursue a full degree -known as degree or diploma mobility (Kelo, Teichler, and Wächter 2006)- whose nationality and normal country of residence before entering UK higher education is outside the EU, operationalised as the European Economic Area (EEA) -that is EU countries plus Iceland, Lichtenstein and Norway- and Switzerland (CUG 2019a). These students pay higher fees than their UK/EU counterparts and have become 'a primary source of discretionary revenues' for UK HEIs (Marginson 2018a: 33). Unlike students that move abroad as part of an exchange programme, which tend to be structured around 'two-way flows and ideally "reciprocal" in terms of similar numbers of both directions of flows and possible direct "exchange" between countries and institutions' (Teichler 2017b: 192), non-EU international students are seen by UK HEIs as a critical resource to fund their activities (cf. Olive 2017) and as a marker of prestige derived from the perception that 'hosting large numbers of international students [is] represented as constitutive of being a truly excellent university' (Findlay, McCollum, and Packwood 2017: 152). Notwithstanding, previous research suggests that non-EU international students are not distributed evenly across the sector (Cebolla-Boado, Hu, and Soysal 2018; Findlay 2011). As I show empirically in this thesis, Non-EU international students tend to concentrate in HEIs that are perceived to be more prestigious using indicators of prestige such as league table data or classifications of HEIs containing

<sup>&</sup>lt;sup>1</sup> While HESA started collecting data in the academic year 1994/95, HESA analysts advised that I start my analysis in 1995/96, when systematic data quality checks started to be applied.

hierarchical dimensions- an issue that has persisted over time. I also show that recruitment of non-EU international students in more prestigious HEIs also appears to be unaffected when policy environments seek to restrict mobility, such as the student visa regulations imposed after the election of the Conservative-led coalition government in 2010, while lesser prestigious HEIs bear most of the sector's reduction in incoming non-EU international students.

Thus, I argue that the current context in which non-EU international student recruitment operates in UK higher education exacerbates the long-standing resource disparities that exist between UK HEIs (cf. Brown and Carasso 2013; CLASS 2019). In this sense, the fact that non-EU international students represent a substantial share of UK HEIs' finances, the skewed distribution of this subset of students towards more prestigious institutions, which tend to be already better resourced (cf. Boliver 2015; Marginson 2018a), means that more prestigious institutions are better able to capitalise funding in the form of non-EU international student fees. In turn, this funding feeds into these HEIs' prestige-building activities, such as research, contributing to the prestige gap that currently exists between UK HEIs (cf. Croxford and Raffe 2015; Marginson 2019b). Moreover, the prestige derived from hosting high numbers of non-EU international students does not just materialise in the form of fees. This subset of students is, in itself, a marker of prestige. As argued by Bloch and colleagues, 'next to other attributes such as selectivity [...] or placement records [...], internationality is one resource used for positioning the university within the field of higher education that is increasingly stratified' (Bloch et al. 2018: 273). This is symbolically galvanised in the way two popular world university league tables -Times Higher Education World University Ranking and QS World University Ranking- measure institutional scores, which includes the shares of students who are international. In both cases, the weight attached to these shares is relatively small -2.5 percent- but it symbolically captures the positional relevance that an internationalised student body has in the global field of higher education. In this sense, Times Higher Education argues that 'the ability of a university to attract undergraduates, postgraduates and faculty from all over the planet is key to its success on the world stage' (THE 2018). Equally, QS states that having high shares of students who are international 'demonstrates an ability to attract faculty and students from across the world, which in turn suggests that it possesses a strong international brand' (QS 2019). This is likely to act as a reproduction mechanism: prestigious universities holding high positions in these rankings are more likely to attract more international students (cf. Cebolla-Boado et al. 2018; Soo and Elliott 2010), which in turn makes them more likely to retain these high positions in the global higher education field.

This introductory chapter, locates the research set out above by contextualising non-EU international student mobility to the UK within the relatively recent global expansion of global student mobility flows. It also reports the way in which recruitment of non-EU international students operates in UK higher education within the context of marketisation of the sector. Second, it argues that researching the evolution of recruitment patterns in UK HEIs is of consequence considering the terms in which they happen. As suggested above, the unevenness of non-EU international recruitment patterns paired with the financial reliance that the sector has developed on the fees brought by these students and the nature of these students as a marker of prestige, contributes to the existing resource and prestige gap between HEIs, hence reinforcing current hierarchical configurations in the UK higher education field. The latter informs my research questions, which are set out later in this chapter. Moreover, studying the recruitment of non-EU international students at the institutional level provides a suitable case study for exploring, sociologically, how HEIs compete for resources in uneven field of power. Finally, this introductory chapter describes the organisation of this thesis.

# 2. The expansion of global student mobility flows and the marketisation of UK higher education

The number of non-EU international students entering UK higher education has increased phenomenally over the course of the last two decades. While these numbers have grown irregularly, with intermittent periods of expansion and plateau as I show in chapter 2, the general trend has been one of growth. In 1995/96, the earliest year in my dataset, there were 18,230<sup>2</sup> first-degree non-EU international entrants, 17,870 pursuing a postgraduate taught degree and 4,930 enrolled in a postgraduate research course at a UK university. Two decades later, these figures were 54,315, 77,270, and 8,770 respectively; 2.98, 4.32 and 1.78 times larger. This expansion coincides with a dramatic expansion in the numbers of globally mobile students. According to UNESCO, in 2016, there were 4,854,346 students pursuing a higher education degree in a country different from their country of origin, 2.4 times larger than in 1998, when there were 2,042,592 globally mobile students. In 1975, around 800,000 students were gaining a degree outside of their countries of origin (UNESCO 2015, 34). Figure 1.1 shows this global trend<sup>3</sup>.



**Figure 1.1.** Evolution of international student numbers globally between 1975 and 2016. Source: UNESCO Institute for Statistics

<sup>&</sup>lt;sup>2</sup> Figures are reported in full-time equivalent (FTE) numbers.

<sup>&</sup>lt;sup>3</sup> This graph has been produced using data from UNESCO's online database [http://data.uis.unesco.org/]. However, UNESCO's data online only goes back to 1998. The data points for the years 1975 and 1985 come from a 2015 UNESCO's report on science and development (2015).

These numbers effectively convey an undeniable reality: more and more students are living abroad for a certain period of time in order to study in a foreign higher education institution. Qualitative research suggests that this has a powerful influence on their understanding of life, their notions of citizenship and their approach to globalisation, and the job market (cf. Gu and Schweisfurth 2015).

Nevertheless, as I explain in chapter 3 where I review existing research on mobility flows and the motivations of students to pursue higher education abroad, these global mobilities of international students are not even or symmetric. Students move disproportionately from the Global South to the Global North (Yang 2003), and the largest recruiters do not necessarily send many students abroad. In this regard, the UK is an interesting case study as it represents an outlier, together with other Anglophone countries, in the global flow of international students. It is the second largest recruiter on earth, with a powerful scientific and higher education system when put in context with other systems (cf. Williams et al. 2016). Considering that a variety of countries, mostly Asian ones, 'gravitate towards a few, wealthy and mostly English-speaking countries' (Börjesson 2017:1264), it could be interpreted that there is a relationship of domination, as 'these countries are traditional global economic and political powers' (Marginson and van der Wende 2007). As explained by Lomer, the 'main host countries are also often ex-imperial centres [...], with the debatable exception of the USA, and use the English language' (Lomer 2017a: 7; in Sidhu 2006).

However, the UK is not just one of the main host countries for international students, it also has, together with other Anglophone countries such as Australia (cf. Marginson 2009), a distinct approach towards international student recruitment. As mentioned in Seeber and colleagues, the UK represents an outlier compared to other European countries in terms of its rationale towards international student recruitment as 'UK HEIs [...] are much more likely than other European HEIs to opt for the revenue rationale' (2016: 694). In fact, they argue that, because the UK has more competition-based resource allocation strategies compared to the European counterparts, UK higher education institutions usually pursue internationalisation strategies with their potential economic returns firmly in mind. This is consistent with the policy changes that have happened, in the last four decades, in relation to the organisation and funding of UK higher education, which 'has been subject to a gradual process of marketisation since the early 1980s' (Brown 2015: 5)

In the context of higher education, marketisation may be defined as the policies that work on the assumption that 'the market is the best means of allocating resources and is therefore the best guarantee of value for money' (Brown and Carasso 2013: 165). These set of reforms are commonly understood as belonging to the ideology of "neoliberalism", which

> 'has come to represent a positive conception of the state's role in creating the appropriate market by providing the conditions, laws and institutions necessary for its operation. [...] In neoliberalism the state seeks to create an individual that is an enterprising and competitive entrepreneur' (Olssen 2016: 130).

In the case of UK higher education, the sector has witnessed a push towards market-based forms of provision, including but not limited to 1) the introduction of accountability mechanisms in research carried out in universities 'in order to provide data for the distribution of [research] funding' (ibid.: 134); 2) the introduction of tuition fees to domestic cohorts to make 'institutions' income dependent in large measure on their ability to attract and satisfy student demand' (Brown and Carasso 2013: 76); 3) and the emergence of tendencies labelled 'academic capitalism', that is driving public and non-profit private higher education institutions to generate 'external monies that are used to cross-subsidize other institutional activities' (Slaughter and Rhoades 2004: 15). In this sense, 'although staff are still largely state-funded, they are increasingly driven into entrepreneurial competition for external funds' (Levidow 2002: 227).

Considering the definition of marketisation set out above, the recruitment of non-EU international students in UK higher education has played a foundational role in the development of these changes. As suggested by Brown and Carasso, the first event in the 'chronology of key developments in the marketisation of UK higher education' was the announcement, in 1979, that 'the remaining subsidies for overseas [non-EU international] students will be ended so that they would have to pay full-cost fees' (2013: 8). Indeed, since 1979, right after the election of the first Thatcher government, mobile students coming from outside the EU –formerly known as the European Community– saw all the public subsidy destined to finance their higher education in the UK removed. Many commentators frame this political decision within the project of reform summarised above as 'marketisation' (cf. G. Williams 1997; L. Williams 1987; Perraton 2014; Palfreyman and Tapper 2016). One of the consequences of this reform project was to ask hitherto publicly funded services to start looking for cash outside the public purse, including universities:

'As not to increase unduly the burden of public expenditure, [UK] governments became increasingly parsimonious in their funding of higher education expansion, and hence (although the overall burden may have continued to rise) expenditure per student declined sharply (Greenaway and Haynes 2000). Thus in the 1970s and the 1980s universities turned increasingly to the recruitment of overseas students (from whom they were required to charge an economic fee) to balance the books' (Palfreyman and Tapper 2016: 48).

Moreover, the recruitment of non-EU international students has not only become a major external source of income, but provision of higher education to this subset of students was also the first activity in UK higher education to be subject to price competition. Between 1979 and 1988, the Committee of Vice-Chancellors and Principals (now Universities UK) used to set a recommended fee for non-EU international students, which universities tended to adhere to (Michael. Shattock 2012). However, in 1988, the then undersecretary of state at the Department of Education, Robert Jackson, labelled the latter practice as belonging to a 'price fixing cartel', advocated for 'free market in fees' and encouraged universities 'to begin price competition for foreign students' (Kiley 1988: 5).

Finally, as suggested by Lomer, the marketisation of the provision of higher education to non-EU international students 'is also apparent in the liberalization of certain aspects of the international higher education market, such as the use of agencies on behalf of national sectors such as the British Council Education Counselling Service and EduFrance [...]. These agencies have undertaken the marketing and advertising of higher education overseas [...], in much the same way as traditional products are advertised and marketed' (Lomer 2016: 5).

## 3. Why does it matter? The recruitment of non-EU international students and resourcing disparities

The development of the scenario described in the previous section created the conditions in which the funding of UK higher education currently operates, where UK universities look for surpluses generated by 'non-publicly-funded teaching [...] and other income, including activities such as consultancy and technology transfer' in order to finance loss-making activities that are underfunded by the exchequer, such as research (Olive 2017). This makes tuition fees from non-EU international students a critical source of income for UK universities. In 2013/14, UK universities generated  $\pounds$ '3.9 billion in non-EU international fees, 12.7 percent of the sector's income (Marginson 2018a). Four years later, in 2017/18, UK HEIs received a total  $\pounds$ 5.2 billion in fees from this subset of students, representing 13.6 percent of the sector's income (HESA 2019d). According to a report published in 2017 by the Higher Education Policy Institute (HEPI), UK universities made, in 2013/14, 'a surplus of 28 per cent on non-publicly funded teaching', which went towards cross-subsidising loss-making activities, with non-EU international students

effectively contributing, on average, over  $\pounds 8,000$  each over the course of their studies to the other activities of UK universities (Olive 2017: 16). In this thesis I argue that there are two main problems associated with relying on this form of non-publicly funded resource.

First, as suggested by Olive, 'there is no guarantee that these sources of income will continue to be available in sufficient quantities' (ibid.). As I show in the next chapter (Chapter 2), UK policy changes -such as student visa reforms- and political and socioeconomic changes elsewhere can have a profound impact on the numbers of non-EU international coming to UK higher education. Moreover, as explained in chapter 6, the sector has developed a growing reliance on a narrow range of countries, particularly China, making UK HEIs' finances vulnerable to changes in China that may deter Chinese students from migrating to the UK –e.g. a potential slowing down of the Chinese economy. The over-reliance on Chinese students and the problems it poses have also been noted in Australia (Marginson 2009). This is problematic not only for UK HEIs' finances, but also for the industry that has been developed around the provision of higher education to non-EU international students. According to a 2018 report, in 2015/16, non-EU international students contributed  $f_{8.1}$  billion to the UK economy in non-fee spending (London Economics 2018). Moreover, friends and family that came to the UK to visit non-EU international students spent a further £0.4 billion (ibid.). A sudden drop in the numbers of non-EU international students would not only impact UK HEIs, but also the businesses providing, inter alia, housing, food, entertainment or course-related services, such as textbooks (ibid.).

Second, the income generated by non-EU international students is not evenly distributed across the sector. UK higher education institutions compete in 'the marketplace' for non-EU international students (Hemsley-Brown and Oplatka 2006), but some HEIs are better positioned than others to play the competitive game (Bourdieu 1993). As I show in chapters 5 and 6, UK HEIs perceived to be more prestigious unequivocally have higher shares of students who are non-EU international, an issue that has persisted over time and increased since the tightening of student

visa regulations brought about by the 2010 Conservative-led coalition government and the 2015 Conservative majority government. As suggested by Marginson, 'the policy pressure to reduce net annual migration, which includes students on temporary visas [...] creates difficulties for lesser status HEIs' (Marginson 2018a: 33). This, according to Marginson, may be exacerbated in the context of Brexit, which may entail a reduction of higher education funding both from stopping participation in EU research programmes and domestic cuts caused by a potential recession. In this sense, Marginson predicts that:

'the top 10 Russell Group universities will struggle through intact. If they lose on EU research they will be able to pump up high-fee international students. However, the middle-regional and lower-tier universities are likely to lose on domestic tuition cuts, EU student falls and disappearing EU regional/structural money, and will be unable to pump up international students enough to fill the hole' (Marginson 2017a).

Unmistakably, those HEIs that manage to have higher shares of students who are non-EU international are better resourced. However, the contribution of non-EU international student fees to the stratification of UK higher education is not just an issue of volume. As non-EU international student fees are fully liberalised, meaning that they 'can be freely varied upwards, they tend to be highest in prestigious universities' (Marginson 2018a: 33). This is confirmed by an analysis of the variation of non-EU international tuition fee levels across different kinds of institution. Currently, there is only one comprehensive survey of UK university tuition fees: the Reddin survey. This was designed and collected by the late Mike Reddin, a social policy lecturer at the London School of Economics, and continued by the Complete University Guide (CUG 2019c; Reddin 2009). The survey is collected by asking individual university administrators their modal fee at different levels of study –undergraduate and postgraduate taught– and for different forms of delivery –classroom-based, mixed, lab-based, clinical and, in the case of postgraduate taught programmes, MBAs. In

some cases, universities provide ranges of tuition fees<sup>4</sup>, without providing data on how different fee levels are distributed across their students (Reddin 2009), which makes this survey imperfect. Notwithstanding these imperfections, the Reddin survey represents the most accurate approximation to UK HEIs' fee levels for non-EU international students.

According to Reddin survey data, in 2016/17, the HEIs that charged the most to non-EU international students for a classroom-based first degree were the University of Cambridge and Imperial College London ( $\pounds$ 24,000), followed by the University of Oxford ( $\pounds$ 22,430). The institutions that charged the least were Leeds Beckett University ( $\pounds$ 9,700) and the University of Bedfordshire ( $\pounds$ 9,750), both post-1992 universities, a common marker of lesser status in UK higher education (Boliver 2015). At the postgraduate taught level, the distribution of fees for classroom-based courses was similar. Again, the University of Cambridge charged the most ( $\pounds$ 22,120) and the Guildhall School of Music and Drama ( $\pounds$ 20,800), and the University of Oxford ( $\pounds$ 22,120) and the bottom end of the distribution, we find two institutions founded after 1992–, the London Metropolitan University ( $\pounds$ 7,280) and the University of Westminster ( $\pounds$ 7,500). The variation in the levels of non-EU international fees charged by UK HEIs can be explained by their position in UK higher education hierarchies. Table 1.1 shows this.

<sup>&</sup>lt;sup>4</sup> In this chapter, when I report HEIs' non-EU tuition fee levels for institutions that reported a range, I use the lower end.

	Golden Triangle	Other Russell Group	Non-RG pre- 1992	Post-1992	$\eta^2$
Classroom-based first degree	£20,087	£15,103	£14,056	£11,912	0.48***
Mixed first degree	£,24,245	£17,384	£14,472	£11,915	0.67***
Lab first degree	£26,144	£19,022	£15,932	£12,054	0.81***
Clinical first degree	£38,262	£31,953	£27,718	£13,759	0.67***
Classroom-based PGT	£19,192	£15,142	£14,072	£11,951	0.42***
Mixed PGT	£21,117	£17,674	£14,462	£12,069	0.51***
Lab PGT	£23,084	£19,166	£15,903	£12,433	0.73***
Clinical PGT	£31,062	£29,900	£17,897	£12,213	0.71***
MBA	£48,067	£24,543	£21,164	£13,872	0.69***

**Table 1.1.** Average non-EU tuition fee levels across HEI types for different types of degree. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Table 1.1 categorises UK HEIs into four types: 1) Golden Triangle, 2) Other Russell Group, 3) Non-Russell Group (RG) pre-1992, and 4) Post-1992 HEIs. This categorisation of universities, commonly found in the literature, captures the fact that some UK universities participate in an exclusive league of global elite universities –the Golden Triangle, including Oxford, Cambridge, Imperial, King's College, UCL and LSE (Wakeling and Savage 2015)– followed by nationallybound tiers of HEIs whose position within the hierarchy has been shaped by history and funding. What we observe in table 1.1 is that these categories capture much of the differences in the non-EU tuition fee levels charged by different universities, with HEIs at the top of the hierarchy charging substantially more than their lower-status counterparts. This is especially epitomised by the fees charged for an MBA, with Golden Triangle institutions charging, on average, 3.5 times more than post-1992 universities, a difference of £34,000 pounds for a one-year course. The significance of this variation is further explored in the last column of table 1.1, in which I present the  $\eta^2$  (eta-squared) values measuring the association between non-EU tuition fee levels and HEI types<sup>5</sup>. In all cases, the proportion of the variation in non-EU tuition fees explained by the type HEIs belong to is very high (ranging from 42% to 81%) and is highly statistically significant.

These differences between institutions, both in terms of the numbers of non-EU international students they recruit and the price they can command for their programmes, and the fact that these are, at least partly, explained by UK institutional hierarchies, can be framed theoretically by understanding UK higher education as a 'field of power' (Bourdieu 1993; Marginson 2008). In this regard, UK higher education institutions exist in a 'field', which in Bourdieusian terms is defined as 'a configuration of positions comprising agents (individuals, groups of actors, institutions) struggling to maximize their position. Conversely, agents are defined by their relational position within the field's distribution of capital (resources conferring power or status) and from which they derive properties irreducible to intrinsic characteristics of the agents themselves' (Maton 2005: 689; cf. Bourdieu and Wacquant 1992). UK higher education institutions - the agents within this field- compete for capital available in the form of fees paid by non-EU international students and the symbolic prestige attached to having a highly internationalised student body. The relational position of these agents within the field means that they have differing levels of competitive advantage, with HEIs holding a high position within the field being more able both to attract international students and, in turn, charge them more for their tuition. This is confirmed by research from Soo and Elliott (2010), which identified that prestigious HEIs in the UK were able to charge more to non-EU international applicants without affecting demand, while lesser-status universities had to reduce their non-EU international fees if they did not want to see demand for their courses from non-EU international students reduced. In their research exploring the relationship between course fees and numbers of applications from non-EU international students, they identified that lesser-status universities that charged higher fees had fewer

 $<sup>^{5} \</sup>eta^{2}$  'measures the proportion of the variation in Y that is associated with membership of the different groups defined by X' (Richardson 2011: 136) and is a common measure of association between categorical and continuous variables in educational research (Trigo-Sánchez and Martínez-Cervantes 2016)

applications from non-EU international individuals, while this association did not exist among high-status universities.

In a nutshell, the current conditions in which the recruitment of non-EU international students in UK higher education operates contributes to its stratification, in the form of resource and prestige disparities between HEIs. The role of non-EU international students as purveyors of funding, which 'is probably the most prevalent in policy discourses' as they 'generate revenue directly, creating and "education export" stream of income (Lomer 2017a: 37)', together with their positional importance as a marker of prestige, affects UK HEIs capacity to access resources, power and prestige, which in turn trickles down to the 'status and income rewards for graduates' (Teichler 2017a: 2). Thus, understanding how these students are distributed across individual HEIs, and how this distribution has changed over time against policy changes becomes of consequence. This informs my research questions.

#### 4. Research questions

In the empirical chapters of this thesis, I explore how patterns of recruitment of non-EU international students have evolved between 1995/96 and 2016/17 in relation to UK policy changes and political and socioeconomic developments elsewhere, with higher education institutions (HEIs) as research objects. As I explain in chapter 2, the period covered here consists of intermittent periods of growth and stagnation, coinciding with policies that seek to stimulate or restrict international student mobility to the UK, and political and socioeconomic changes elsewhere. The first period of growth starts in the academic year 1999/2000 and ends in 2003/04, coinciding with the first Prime Minister's Initiative, a set of policy measures set by the first Tony Blair government seeking to increase non-EU international student recruitment. This was followed by a period of stagnation between 2003/04 and 2007/08, mainly caused by the accession of 10 hitherto non-EU countries to the EU and a particularly high pound-yuan exchange rate that

brought about a reduction of Chinese students entering UK HEIs. Between 2007/08 and 2010/11, numbers grew again, coinciding with the second Prime Minister's Initiative, which also sought to stimulate recruitment. Finally, numbers begun to stall and decrease again after 2010/11, immediately after the election of the 2010 Conservative-led coalition government, which implemented a set of migration policies that tightened student visa requirements. These distinct phases are explained in further detail in chapter 2.

The empirical analysis is scheduled in two main chapters. Chapter 5, the first empirical chapter, focuses on a cross-sectional analysis of the distribution of non-EU international students across UK higher education institutions, drawing on data for 2016/17, the most recent year in my dataset. This academic year sits in a lustrum after the introduction of the Coalition migration policies and represents an up-to-date description of the current landscape of non-EU international students in UK higher education. In chapter 5, I set out to answer two primary research questions:

- To what extent are non-EU international students unevenly distributed across UK HEIs?
- 2) What explains this uneven distribution?

In chapter 6, I explore the drivers of change over time in the distribution of non-EU international students across UK HEIs, drawing on a longitudinal analysis of data for the period from 1995/96 and 2016/17. In this chapter I analyse how patterns of recruitment across HEIs have changed against the phases described above, focusing on the effects that milieus of expansion and stagnation have had on the distribution of non-EU international students across HEIs. To do so, I set out to answer the following research questions:

3) To what extent was the growth experienced in the periods between 1999 and 2003, and 2007 and 2010 of non-EU-international students unevenly distributed across UK HEIs?

- 4) To what extent was the stagnation experienced in the periods between 2003 and 2007, and since 2010 of non-EU international students unevenly distributed across UK HEIs?
- 5) What explains this uneven distribution?

This empirical study also systematically distinguishes recruitment patterns across different levels of study – first degree, postgraduate taught and postgraduate research– as 'the motivations for and pathways leading into undergraduate and postgraduate studies may differ' (Cebolla-Boado et al. 2018: 371). Moreover, different levels of study, which have different durations, can be marketed differently. In the case of postgraduate taught degrees in UK higher education, the fact that most of them tend to last for just one academic year makes them particularly attractive to non-EU international student markets (Davey 2005; Mackie 1980). Indeed, qualitative research indicates that university managers in the UK see the expansion of postgraduate taught degree in high-demand subjects –like business– as an opportunity to increase recruitment from this subset of students (Findlay et al. 2017). As argued by Marginson, some universities expand 'in capitalist fashion [in] the market in Business Masters degrees' (Marginson 2006: 22).

#### 5. Organisation of the thesis

Considering the relevance that non-EU international student recruitment has for the current functioning of UK higher education, in the next chapter, chapter 2, I provide a brief history of international student mobility to UK higher education, starting in the middle ages up until the present day. This history includes accounts from historiography and historical sociology exploring the evolution of the meanings and the scale of this form of mobility throughout distinctive epochs, going through Europe's religious wars during the Early modern period, the British Empire, decolonisation, and Thatcherism. Then, this chapter sets out to develop a periodisation of UK policy phases –and political and socioeconomic changes elsewhere– that may have had an impact on non-EU international student recruitment patterns during the period analysed empirically in this thesis –between the academic years 1995/96 and 2016/17. This periodisation draws on Sylvie Lomer's (2017a) work on policy discourses around non-EU international students, together with a critical analysis of the academic and policy literature. Moreover, in this section, I chart the evolution of non-EU international student numbers across all levels of study –first degree, postgraduate taught, and postgraduate research–, mapping them against the periodisation developed in chapter 2.

Chapter 3 reviews sociological and educational research containing theoretical and empirical accounts on the factors influencing international students' decisions to pursue higher education abroad, with a particular focus on work looking at mobility to UK higher education. First, it discusses explanations of why students, coming from different national contexts, may be "pushed" to study somewhere else. Then, it goes on to explore why UK higher education is particularly attractive to prospective mobile students, suggesting that current geopolitical power relations, shaped by histories of colonialism, produce powerful imaginaries around the idea of what a "good" higher education is supposed to be -i.e. in English, and in a well-reputed 'Western' university (cf. Beech 2015; Xiang and Shen 2009). Third, Chapter 3 identifies a set of predicted drivers that may explain why some UK HEIs are better than others at recruiting non-EU international students, namely: 1) the perceived reputation of universities; 2) their geographic location, particularly in London, UK's global city (Sassen 1991); and 3) strategies that may allow them to increase recruitment, that is setting up a satellite campus in London, increase their provision in highdemand subjects such as business, and target particular markets -i.e. countries and regions, which may result in non-EU international student populations coming from a narrower range of countries. These predicted drivers are then turned into working hypothesis that guide my empirical chapters. Finally, Chapter 3 reflects on the nature of UK higher education as a 'field of power' in order to understand how competition to attract this subset of students works. In this regard, I argue that the hierarchical position of UK universities within the field shapes the way they engage

in the recruitment of non-EU international students, with universities at the top being autonomous from the market and UK policy dynamics. Conversely, lesser status universities need to undertake position-taking strategies in order to maintain their competitiveness within this highly hierarchical field.

Chapter 4 describes the dataset used in the analysis and discusses the statistical methods used to analyse it. First, this chapter considers different sources of data that contain information on non-EU international students, arguing that the census-like approach used by HESA is the most appropriate in order to address this thesis' research questions. Then, chapter 4 discusses how this dataset has been cleaned and recoded ready for analysis and describes a set of operationalisations for derived variables that capture the predicted drivers identified in chapter 3. Third, chapter 4 reflects on the appropriateness of using ordinary least squares (OLS) multiple regression modelling to identify the institutional factors that shape their recruitment levels, and the suitability of using linear splines in order to account for the uneven patterns of growth found in recruitment patterns, as described in chapter 2. Finally, this chapter offers a critical account of the epistemological assumptions that are commonly found when using multivariate modelling in social science research.

Chapter 5, the first empirical chapter of this thesis, looks at which factors affect individual HEIs' shares of students who are non-EU international across all levels of study in 2016/17, the last year of my dataset. In this regard, I consider 2016/17 the closest representation of the current situation of non-EU international student recruitment in UK higher education. First, the chapter provides a rich description of the data, discussing how non-EU international students are distributed across HEIs and subjects of study, and the countries these students come from. Then, chapter 5 makes use of bivariate statistics in order to assess which predicted drivers may allow us to explain the distribution of non-EU international students across UK HEIs, finding that variables capturing institutional hierarchies best explain this distribution. Then, this chapter

explores how institutional strategies developed in order to make HEIs' provision more attractive to non-EU international students vary across HEIs. The results suggest a stark divide between UK HEIs belonging to a global elite of institutions -here operationalised as those universities belonging to the so-called Golden Triangle (Wakeling and Savage 2015)- and universities belonging to lower tiers of the hierarchy but showing high levels of engagement in the non-EU international student market. More specifically, Russell Group universities that do not belong to the Golden Triangle are shown to be more likely than other universities to set up a satellite campus in London and to recruit their non-EU international students from a narrower range of countries. Moreover, less prestigious higher education institutions are shown to be more likely to have their non-EU international students concentrated in a small number of high-demand subjects of study. Finally, chapter 5 fits an OLS regression model to assess the net effects of each predicted driver on the shares of students who are non-EU international in different HEIs. These analyses are carried out separately in relation to undergraduate, postgraduate taught and postgraduate research levels of study. For postgraduate taught provision in particular, the predictors examined explain a particularly large proportion of the institutional variance in the percentage of students who are non-EU international. This, as I discuss in chapter 2, is likely to be due to the fact that this level of study has been historically subject to higher levels of marketisation.

Chapter 6 sets out to assess whether the explanatory power of the model developed in chapter 5 holds longitudinally. To do so, I fit a series of OLS regression models with linear splines, which allow me to estimate the relationship between the dependent variable –the share of each HEI's students who are non-EU international– and the explanatory variables as a piecewise linear function, creating different slopes coinciding with different periods of growth and stagnation (StataCorp 2017). It also looks at how these predicted drivers can explain the variation in shares of students who are non-EU international between HEIs against the policy phases defined in chapter 2, and explores how the growth in these shares have varied over time across different institutional types. First, this chapter concludes that institutional disparities in the shares of

students who are non-EU international have persisted over time, with universities sitting at the top of the status hierarchy being better able to recruit higher shares of non-EU international students, particularly at the first degree and postgraduate taught levels, over the entirety of the period under study. In terms of growth of these shares, the results indicate that these have been similar across the hierarchical spectrum but with one exception: since the election of the Conservative-led coalition government in 2010. It appears that the policies implemented by the latter government, seeking to tighten student visa rules, had a particularly detrimental effect on HEIs sitting in the bottom of the status hierarchy. In this regard, while the shares of students who are non-EU international in universities at the top of the hierarchy continued growing, HEIs at the bottom of the hierarchy suffered a substantial loss in their shares. These models also find that HEIs located in London suffered, on average, a more modest reduction in the share of their students who were non-EU international than universities located elsewhere during this same period since 2010. Finally, in terms of institutional strategies, I observe that there is an association between HEIs' provision in high-demand subjects and drawing their non-EU international students from a narrower range of countries. Regarding the former, this association remains constant for the period under study. However, I show that the negative relationship between HEIs' shares of students who are non-EU international and the diversity of their non-EU student body strengthens after 2010/11 at the postgraduate taught level. This could be due to two reasons. First, it could be argued that those universities that developed recruitment strategies targeting a small number of high demand sending countries since the election of the Conservative-led coalition government have been more successful at sustaining if not increasing their shares of students who are non-EU international. Second, I also show that, since 2010/11, most of the plateauing of non-EU international students has been caused by a decline of Indian students, compensated partly by disproportionate growth of students coming from China (MAC 2018). This, together with the fact that Chinese students appear to be more attuned to UK national hierarchies (cf. Cebolla-Boado et al. 2018) may have enabled better-resourced, more prestigious universities to capitalise most on this continued growth of Chinese students entering UK higher education.

#### International students in UK universities: history, drivers and policies

#### 1. Introduction

The notion of the "wandering scholar", understood as students and teachers moving across borders to pursue higher learning (cf. Pietsch 2010), is commonly used as a historical figure that serves as the genesis of a phenomenon of great contemporary relevance: international student mobility. Although this figure has become somewhat of a platitude, it reflects the determination that higher education institutions and students alike have to make sense of the increasingly common experience that is moving to a different nation state to undertake higher education (Gürüz 2008). The term also appears to contain the desire of finding continuity in some understandings of what a university education is supposed to deliver: well-rounded training with a universalist scope. For instance, David Willetts, former UK minister of state for universities and science between 2010 and 2014, discusses how internationally mobile students are 'at the heart of what [one] think[s] a university is and its role in the world' (2017: 302) and links this understanding to higher education in the middle ages, which, according to him, was crucially shaped by mobile students. However, how has international student mobility *really* evolved throughout history, both in terms of meaning and scale? And more importantly in the case of this research, how has international student mobility into UK higher education institutions evolved over time?

This chapter endeavours to address these questions. I do this to provide a rich description of the context against which I carry out the empirical analysis of data for recent decades in this thesis. As explained in the introduction, this thesis explores patterns of recruitment of non-EU international students to UK higher education institutions since the mid-1990s. It asks how these patterns have evolved over time against the backdrop of policy changes in the UK and socioeconomic developments elsewhere, and how these changes have affected different sectors of UK higher education. Thus, this chapter provides a historical backdrop, which will allow me to frame changes in patterns of recruitment and develop causal explanations.

This chapter is divided into three sections. First, this chapter sets out a brief history of international student mobility to UK higher education from the middle ages up to the 1990s, immediately before the period analysed empirically in this thesis. In this first section, I attempt to provide a rich, though succinct, narrative about how the nature of international student mobility has evolved over time, from the times of medieval Christianity until Thatcher's austerity agenda, going through the era of European religious wars and Britain's imperial century. To do so, I draw on historiographical research dealing with historical accounts of higher education. Section two of this chapter develops a periodisation of UK policy milieus regarding non-EU international student recruitment between the academic years 1995/96 and 2016/17, the period analysed empirically in this thesis. This periodisation also refers to socioeconomic changes elsewhere that may have had an impact on non-EU international student recruitment patterns to UK higher education. In this second section, I adopt a mixed-methods approach. On one hand, I draw on a critical reading of Sylvie Lomer's (2017a) work, in which she presents a periodisation of UK international student policy from 1999 to 2015. On the other hand, using the dataset analysed in this thesis, I provide a further nuanced account of Lomer's classification that puts non-EU international student recruitment patterns at the heart of the periodisation. Finally, I close this chapter by arguing that current understandings of international student mobility into the UK are dominated by two major forces: a hegemonic model of higher education that prioritises Anglo-Saxon institutional models which attract students from elsewhere; and the economic resources that these students bring to UK higher education institutions in the form of fees in a context of dwindling public investment in higher education, particularly in the shape of block grants (Geuna, Piolatto, and Labini 2015)

#### 2. A potted history of international student mobility to the UK

Universities, understood as institutions of higher learning, have historically had a strong international character. As Robert Harris suggests: 'there is nothing new about the participation of overseas students in universities' (1995: 79). In the case of the UK, which is the main focus of this thesis, it 'has recruited and welcomed international students into higher education for a long time, [...] as part of its imperial rule, and more recently as a strategy for economic growth [with] Government policies [playing] varied roles in encouraging or limiting international student numbers' (Lomer 2017a: 1). This section aims to provide a synthesis of existing evidence and thinking on the nature of the mobility of higher education students across borders –particularly to the UK–, from the middle ages up to the mid-1990s.

Before I delve into the history of individuals crossing borders to pursue a higher education, it is important to clarify a variety of concepts that are recurrent throughout this section. First, by universities, I refer to the institutional models and their predecessors that currently dominate international student flows; that is Western institutions of higher education (cf. Börjesson 2017). I pay particular attention to Anglo-Saxon models, which mediated by American hegemony, 'define [...] the [contemporary] idea of a university' (Marginson 2008). However, it is important to remark that, historically speaking, there have been very high levels of international mobility among non-Western centres of higher learning. We find a good example of the latter in 6<sup>th</sup> century India: the University of Nalanda 'attracted students and staff from all over the Buddhist world' (Altbach and de Wit 2015: 5).

It is also difficult to specify what do we mean by "foreign" when producing historical accounts on international student mobility. Hilary Perraton, author of the most comprehensive investigation on the history of international students in Britain to date, argues that historical understandings of foreignness have mutated over time in line with the consolidation of the modern nation state, the incorporation or exclusion of territories to the latter and, more recently, the
development of colonial projects. For instance, 'students from Ireland were certainly foreign until 1540 when Henry VIII adopted the title of king of Ireland' or that 'Indian students are now regarded as foreign but, in the first half of the twentieth century, were British subjects' (Perraton 2014: 3). Furthermore, these historical shifts in our notion of foreignness are particularly problematic when talking about higher education in a world before the conception of the modern nation state. In medieval universities, "nations" were organisations of 'students from other lands beside their own' (Hutchinson and Smith 1994: 135), which did not necessarily mean other countries, in the modern sense, but parts of countries whose individuals shared a common set of features –'the idea of common blood ties' (Hutchinson and Smith 1994: 38).

Regardless of the differences and changes in meaning, both legal and cultural, of foreignness across centuries, othering individuals based on their origin in higher education institutions has been commonplace throughout history (for a debate on Otherness in international higher education see Marginson 2013), the evolution of which will be explored below.

# 2.1. The mobility of students before the nation state: foreign students in Medieval universities

Medieval universities in Europe, characterised by an autonomous corporative identity (Muñoz 2007), were spaces of erudition comprising individuals from all over the continent. In these institutions, regarded as the oldest predecessors of the modern university (c.f. de Ridder-Symoens 1992), students from abroad were so numerous that individuals from distinctive regions would organise themselves in *nationes*, a sort of student societies, that 'play[ed] key roles in the governance of institutions' (Gürüz 2008: 120). Together with the usage of a common language, Latin, medieval universities conformed a 'medieval European education space' (Altbach and de Wit 2015: 5). Indeed, the fact that universities all over Western Christendom shared a common denomination (*studium generale*), that their taught contents followed virtually the same script and that 'qualifications [were] universally recognised' is a clear sign of this (Perraton 2014: 20).

In this context of a shared European medieval higher learning space, Britain saw the emergence of two universities that held the monopoly (or duopoly) of higher education in the British Isles until the 15th century and in England until the 19th century: Oxford and Cambridge. The former, founded in the 11<sup>th</sup> century but consolidated in the 12<sup>th</sup> century, and the latter, created by a secession from Oxford in 1209 (Anderson 2006: 2), did not have a particularly high presence of foreign students compared to their continental counterparts. Ironically, contrary to today's reality, England's connection to the wider world in the Middle Ages via higher education was through exporting more students than it imported. Although data about this period is scarce, Perraton (2014) suggests that 'both universities were predominantly English' (Perraton 2014: 20). Up to 1500, 2 per cent of Oxford's alumni came from outside the British Isles. Cambridge's international (non-British Isles) student body amounted to less than 1 percent of their total alumni register (Perraton 2014: 20). Interestingly, Willetts (2017) indicates that while foreign students were an important source of revenue for European Medieval universities, the fact that their presence was scant in Oxford and Cambridge meant that 'their exclusive access to domestic students mattered more [which may explain why] they were so keen to preserve their duopoly' (Willets 2017: 302).

If Medieval European Christendom offers us a good example of how a supranational political organisation, in this case European Christianity, encouraged mobility, Early Modern Europe exemplifies how this 'was shattered and remoulded [...] changing the confessional character of universities [and] profoundly affected the choice [by foreign students] of universities and disciplines' (de Ridder-Symoens 1996: 419).

# 2.2. International students in Early Modern Europe

At the dawn of Early Modern Europe, political and religious conflict brought about the forceful implementation of mobility restrictions among scholars. The protestant reformation and counter-reformation encouraged rulers to apply the maxim '*cujus regio, eius et religio* (let each country follow its ruler's religion)' (De Ridder-Symoens 1996: 419), which in turn meant that legislation was passed banning students form undertaking study abroad. This sought to avoid the spread of ideas about the nature of power and religion that rulers from either side would deem as heretical or subversive.

Nevertheless, Early Modern European mobility shows strikingly similar patterns to today's international student mobility landscape. As stated by De Ridder-Symmoens in her meticulous exploration of mobility patterns among students in Early Modern Europe, 'migrant students from countries on the fringes of Europe [show] remarkable similarities and is quite different from that of students from the larger central European countries' (De Ridder-Symoens 1996: 439). That is, students coming from hegemonic countries –what we would regard today as "superpowers" – were less incentivised to move than those in the periphery. One of these fringes was Scotland. Up to the late seventeenth century, Scottish students were more likely to study abroad than at home. Indeed 'the national universities founded in the fifteenth century (St Andrews 1411, Aberdeen 1495) [...] had great difficulty in establishing themselves and winning acceptance from students of their own country' (De Ridder-Symoens 1996: 439).

While this pattern of asymmetric immobility remained in place throughout the *ancien régime*, with plenty of obstacles faced by wandering scholars and students, it is also true that thousands of them 'travelled all over Europe in search of knowledge, culture, adventure, safety, people of their own religion, and more prestigious academic degrees, or merely to ape the fashion of the moment' (De Ridder-Symoens 1996: 442). This phenomenon, together with the relatively pleasant mobility enjoyed by Medieval students, is crucial to understand both the history of universities and their subsequent evolution. That is likely to explain why Wilhelm von Humboldt, despite being a subject of a kingdom that banned studying abroad, successfully managed, in 1810, to convince the king of Prussia to allow students to travel again to study (De-Ridder-Symoens 1996: 446-447).

# 2.3. International students or imperial subjects? UK Universities and the empire

In modern Britain, 'the entry into British higher education of significant number of non-European students [has been] largely a product of [the British] empire' (Harris 1995: 79). In many ways, universities were a core institution in both the operation and the dissemination of Imperial ideals between 1815 and 1914, the period historians call the 'imperial century' (Hyam 2002). UK universities educated imperial subjects and also provided a model for the new universities that were to be founded in colonial cities such as Sydney, Calcutta or Bombay (Whyte 2015: 75). An imperial mindset persisted in the debates around foreign students studying in the UK until well entered the second half of the 20<sup>th</sup> century. For instance, the then Committee of Vice-Chancellors and Principals (now Universities UK) emphasised, in 1946, amidst a public debate on the need for universities to provide further training, that universities had the 'imperial duty to provide places for undergraduates from the colonies, postgraduates from the dominions, and for the education of students from further afield like China and Turkey' (Michael Shattock 2012: 12).

Moreover, the relationship between universities and the Empire was also found in the need to educate the governing classes of the colonies and the metropole. An example of the latter idea can be found in William Temple's, former archbishop of Canterbury between 1942 and 1944, remarks in 1912 on the function of universities under the empire: 'it is the supreme function of the Universities to guide the thought of those who mould the destiny of the nation and the empire' (Anderson 2006: 57).

This understanding of higher education as an enterprise designed to train the ruling strata of society was a distinct feature of universities during the British empire. It was relatively common for the middle and upper classes of the empire – 'the children of the empire' as labelled by Perraton (2014: 42)– to send their children to study in Britain. This was facilitated by the fact that 'it was easy to travel to Britain in the nineteenth century [...], passports were rare before 1915 [and] the costs of travel fell as railways crisscrossed Europe and steamships shortened journeys' (Perraton

2014: 41). The consequence of this was that, between 1800 and 1900, foreign students made up around 8 to 10% of university students in the UK (Perraton 2014: 41).

The role of UK higher education in training today's world elite could be interpreted as a continuation of the former imperial role of universities. In the current geopolitical context of globalisation, this has been reframed as "soft power", which assumes that 'international students enhance the UK's global political influence' (Lomer 2017b: 581). This is particularly important when educating potential future members of foreign governments. According to research carried out in 2015 by the think tank Higher Education Policy Institute (HEPI), 55 world leaders –defined as presidents, prime ministers and monarchs– attended higher-level education in the UK (HEPI 2015), a good proportion of whom came from former British colonies.

# 2.4. Imperial subjects turn foreign citizens: The Commonwealth and the post-war period

The post-war period in Britain brought about radical transformations to its global standing and reconfigured domestic policies, the relationship between citizens and the Government and witnessed a phenomenal expansion of UK's national higher education (Boliver 2011; Scott 1995). As stated by Perraton:

> 'In Britain, not only did the 1944 Education Act promise secondary education for all but government welcomed proposals to double the university grant, double university numbers, and triple the production of scientists and technologists. The post-war government went on to accept recommendations from a quartet of committee, Goodenough, Barlow, Clapham and Scarbrough, to expand teaching in medicine, science and technology, social science, and oriental and Slavonic studies. University enrolments grew four-fold in the 35 years from the end of the Second World War' (Perraton 2014: 81).

This growth in enrolments was also matched by a burgeoning number of universities, which eventually accommodated international students:

Between 1948 and 1955 five university colleges gained their charters and one was established. Some 12 technical colleges became colleges of advanced technology (CATs) in 1956 and gained university status within ten years; they were joined by a new round of green-field foundations. By 1979 Britain had 46 universities, up from 11 in 1945, while student numbers rose from their pre-war level of 50,000 to 300,000. In 1965 the next group of technical colleges followed the CATs on their upward path and gained a new status, emerging as 30 polytechnics in a binary system of higher education' (ibid.: 82).

This expansion of the system was driven both by policy and public demand. The UK government increasingly saw education as the means to economic growth, which devoted more and more resources to higher education, and social demand started to grow as it was progressively seen as a way to become socially mobile (Wolf 2002). In this sense, Perraton argues that this milieu also affected the numbers of students coming to the UK from abroad, which between 1946 and 1976 grew from 7,000 to 34,000 (Perraton 2014: 83). According to Perraton, this growth was driven by 1) 'rising prosperity as the world recovered from war' and 'new sources of wealth' such as oil, which 'lubricated student mobility [...] from Nigeria and the middle east'; and 2) the politics of decolonisation (ibid.: 85). In this sense, developments in the former colonies bring about the 'recognition that the colonies would need large numbers of professionals in medicine, law, technology and agriculture, and not just a small cadre of administrators' (ibid.). Moreover, it is in this period when we start to see –probably due to an improvement in data collection– how changes in the global economy may also affect the numbers of students coming to the UK to pursue higher education. First, Perraton acknowledges the fact that exchange rates between two currencies may

affect international student mobility, a phenomenon that has recently caught the attention of some researchers (London Economics 2017; Naidoo 2007). He goes on arguing that 'two devaluations' of the British pound between 1946 and 1966 caused the numbers of American students in British institutions to increase eight-fold (Perraton 2014: 83). Second, he also argues that higher education opportunities at home may also shape the needs of prospective international students to enrol in a course in Britain. In this sense, he suggests that the fall in numbers of Indian students in the 1960s and 70s may had been caused by 'university opportunities in India [...] as numbers rose from 198,000 to nearly 3 million [in Indian universities]' (ibid.: 87).

However, there were two main policies that substantially shaped the movement of international students to UK universities during the post-war period: 1) migration policies that turned former subjects of the empire into foreign citizens with restricted rights; and 2) the introduction of differential fees for international students in October 1966. While these new differential fees were still subsidised, they were a premonition of the full-cost fees introduced in 1979. In both cases, the driver was the same: it was not politically acceptable to see international students 'occupying places subsidised by the British taxpayer' (Lee 1998: 318).

Changes in immigration policy during the post-war period are appropriately summarised, again, by Perraton:

'Citizens of the colonies had a right to move to Britain which was reconfirmed in the 1948 British Nationality Act. Despite hesitations within government on the arrival in the same year of the *Empire Windrush* [...], Commonwealth citizens retained the right to travel and stay in Britain until the Commonwealth Immigrants Act of 1962 [passed by the Conservative government led by Harold Macmillan]. The migration laws had a pronounced effect on those who came with the intention of combining work and study' (Perraton 2014: 94). Regarding differential fees, these were introduced by the 1966 Labour government, which was facing pressures ranging from the threat of sterling devaluation, 'rising costs of defence expenditure, and the need to revise welfare benefits if savings made across the board were likely to have damaging effects on the poor' (Lee 1998: 305). According to Lee, this 'decision reinforced the legitimacy of controls over immigration from the Commonwealth introduced by the Conservative government in 1962, because it treated Commonwealth students for the first time as if they were foreign' (ibid.).

#### 2.5. Market imperatives and the end of the post-war consensus

In November 1979, the then Chancellor of the Exchequer Sir Geoffrey Howe published the first Thatcher's Government's expenditure plan for the years 1980-81 (HMT 1979). Its release represented another nail in the coffin of the post-war consensus on social and economic policy, becoming a milestone in the implementation of Thatcher's government economic philosophy. This saw 'the future growth and development of the UK economy dependent upon the elimination of inflation, the reestablishment of economic incentives, the return of many activities to the market place and a reduction in the public sector's involvement in economic and social affairs' (Jackson 1980: 66). As we have seen in previous sections, the period comprised between the end of World War II and Thatcher's government's election was characterised by an expansion of public spending: between 1900 and 1980, expenditure as a proportion of UK's income on education, housing, health, social security and services rose from 2.6 per cent to 25 per cent. Higher education was not treated differently and the sector experienced an expansion of both funding and student numbers (Shattock 2012: 105). However, as a result of limited economic growth and growing inflation in the 1970s, the new Conservative government brought the post-war consensus into a halt. Austerity measures were announced, and education spending -together with other social policy areas- 'was bound to suffer, and by 1992 was almost back to 1960 levels' (Shattock 2012:

105). This started a historical period defined by David Harvey as the 'corporatization and privatization of hitherto public assets (such as universities)', characterised by the financialization of the economy and entailing accumulation by dispossession (Harvey 2003: 148). In this sense, as Hilary Perraton puts it, 'in 1979 overseas students felt the cold touch of austerity even sooner than university bursars' (Perraton 2014: 116). The Government's expenditure for the years 1980-81 stated that while 'the resources available for home students in higher education will be about the same as in 1979-80 [, n]ew overseas students or their sponsors will be expected in the future to meet the full cost of their tuition' (HMT 1979: 6). In this context, overseas students were those individuals whose normal place of residence was outside the European Economic Community (EEC), later succeeded by the European Union in 1993. Due to reciprocity arrangements, EEC students would be 'given home-status for fees purposes' (Williams 1984: 265). As a side note, it is interesting to note the debate that happened during these years about whether EEC students should be regarded as "overseas". There were debates about whether concessions should be made for Commonwealth students rather than for EEC ones, stemming from an 'old imperial argument about Commonwealth cohesion' and fears that the full-cost fee policy 'would weaken the Commonwealth as an institution' (Perraton 2014: 120). Eventually, pragmatism and European diplomacy tilted the scale. First, a concession for Commonwealth students would have threatened the intended effect of the policy -savings- as students from these countries represented well over half of total foreign students (ibid.: 121). Moreover, the project of European integration, which included reciprocity, also convinced the Foreign Office. Anecdotally, when this was being discussed, the German ambassador to the UK told Mark Carlisle, the then education secretary, that 'this was rather a test of whether [British people] were "good" Europeans!!' (ibid.).

The announcement in 1979 that overseas students must pay for the full cost of their higher education marked the beginning of a new era, defined by many as the age of the marketization of UK's higher education (see Brown and Carasso 2013; Collini 2017; Michael Shattock 2012; Walker 2013; Williams 1997). In fact, this policy brought about –although authors do not agree on whether

this was intentional— the booming of international higher education exports, allowing some universities to exploit the lucrative market of fee-paying international students. Tangentially, this partially caused further changes to UK higher education. Michael Shattock, in a thoroughly researched piece on British higher education policy-making, wrote that 'the lack of a university title was a decisive disadvantage in recruitment, and particularly of international students. The marketing image was the determinant [in achieving the university status of former polytechnics]' (2012:84). There are many interpretations of how higher education has been conceptualised, managed and provided during the last 4 decades. For instance, Simon Marginson (2017: 2) offers a nuanced explanation, arguing that undergraduate education in the UK is not a pure market but is regulated as 'a student loans-based market in which HEIs are expected to respond to the "consumer". However, there is a consensus that, in the last 40 years, the sector has experienced structural changes that brought about a redefinition of the purpose of higher education. Hilary Perraton links these two processes eloquently:

<sup>4</sup>Major changes came in the 1980s when shifting ideologies, and changing geopolitics, moved education in a quite new direction. The 1979 government was unwilling to regard Commonwealth students more favourably than others. More significantly it respected market forces and expected others, including the educational establishment, to do so. Universities then moved ahead of government, seeing the vigorous and competitive recruitment of overseas students as a way of securing and increasing their income. By the early twenty-first century the government, its agency the British Council and the universities were using the language of the market to describe and explain their policies. Although academic values still influenced policy and internationalist convictions played their part in the decisions of universities and of universities were increasingly recruited not to support an

imperial ideal, or in the interest of international development or disinterested scholarship, but to help balance the university books' (Perraton 2014: 230-31).

As a matter of fact, Perraton points out a process that is highlighted frequently in the literature: national policy-making in relation to overseas students has been inconsistent throughout the period under study and effectively designed, shaped and delivered at the institutional level. In this sense, 'the doubling of the proportion of overseas university students between the early 1990s and the late 2000s reflected individual university practice far more than deliberate or national policy' (Perraton 2014: 230). In fact, 'changes in student numbers, and in practices affecting them, were often a response to foreign students and their circumstances rather than a consequence of deliberate policy' (Perraton 2014: 229). Sylvie Lomer's (2014, 2017a) thesis points towards the same direction. As argued by Gareth Williams (1997), (some) universities reacted to the 1979 decision to charge non-EU international students the full cost of their higher education by actively marketing to and recruiting targeted prospective students. That market response was a 'flesson that was] not lost on the government [as] the universities would respond like any other organization to market and quasi-market incentives' (ibid., 276).

Notwithstanding, things started to change in the 1990s, when 'the first explicit policy intervention' regarding international students was launched (Lomer 2017a: 1), in this case targeting non-European Union students. Tony Blair's government, seeking to capitalise on the revenue brought by these students, pushed the sector to increase recruitment. The 1990s mark the beginning of the period analysed in this thesis, which goes up to 2016/17. In the following section, building on the work of Lomer (2017a) I develop a periodisation of these two decades, setting up the backdrop against which my analysis is carried out.

#### 3. A periodization of UK policies on international students from 1995/96 to 2016/17

Policy around UK international students over the last three decades has had two dominating and conflicting features: the development of UK universities as 'significant export industries' (Van Reenen 2012; in Willetts 2017: 305) and the lack of political appetite among both New Labour and Conservative governments to increase the presence of migrants. The latter, as the former minister of state for universities and science David Willetts put it, 'could see us deliberately strangling one of our great international success stories' (Willetts 2017: 318). This 'international success story' refers to a period of remarkable growth in the numbers of non-European international student numbers in the last decade of the 20<sup>th</sup> century and the first decade of the 21st century. By the early 2010s, UK migration policies seeking to restrict 'high-skilled immigration to meet an arbitrary net immigration target' (Van Reenen 2012), paired with a global plateauing of the numbers of students enrolled in tertiary courses away from their home countries (OECD 2017: 295), caused the numbers of non-European students coming from abroad to UK higher education institutions to stall. The conflicting agendas found in policy-making around international students in the UK during the past quarter of a century reflect what Hollifield calls the "liberal paradox" (2004), which 'lies in the opposition between, on the one hand, domestic security concerns that moves states to control their borders and, on the other hand, international economic forces that push towards free circulation of goods, services and people' (Levatino et al. 2018: 367).

This section aims at providing a description of the different policy periods regarding non-EU international students that may impact on non-EU international student recruitment patterns. Laying down the context in which these patterns occurred will allows me to explore, in the empirical chapters of this thesis, the consequences of these policy periods for the distribution of non-EU international students across the sector. First, this section charts trends over time in the numbers and proportions of non-EU international students enrolled on first degree, postgraduate

taught (PGT) and postgraduate research (PGR) programmes in UK higher education<sup>6</sup> institutions since the academic year 1995/96. Second, drawing on Sylvie Lomer's (2017a) work, I develop a periodisation of UK policies and socioeconomic and wider political changes to frame the latter trends. Lomer's research includes the following periodisation of UK policy-making on non-EU international students from 1999 to 2015:

<sup>(Policies on international students in the UK can be broadly grouped into 3 main stages. Firstly, the Prime Minister's Initiative (PMI) ran from 1999-2004. It was followed by the PMI2, the second phase of the Prime Minister's Initiative, which ran from 2006-2011. Finally, the Coalition's IES [International Education Strategy], published in 2013 marked the beginning of a new period' (Lomer 2017: 53).</sup>

Lomer's work understands that the policy domain on non-EU international students includes the activity of 1) universities themselves, 2) quasi-independent bodies in relation to quality assurance, economic accountability and funding, and 3) government departments. Regarding the work of government departments, international students are an object of policy across different policy areas. First, as education exports falling under the domain of the Treasury and, until 2016, under the Department for Business, Innovation and Skills. Second, international students are also affected by migration policy, primarily regulated by the Home Office.

Moreover, this periodisation seeks to offer a framework by which patterns of incoming non-EU international students can be explained, even if these may not be related to UK policy changes but developments elsewhere. As shown empirically in the following subsection, there was a period of plateau between 2003/04 and 2007/08 that cannot be explained by looking at UK policy alone, which, back then, was developed within a particularly welcoming mindset. As a matter

<sup>&</sup>lt;sup>6</sup> In this thesis, by 'higher education' I mean publicly funded UK multi-faculty and specialist universities and the privately funded University of Buckingham.

of fact, in 2004, the post-study work (PSW) route was introduced, allowing non-EU graduates to work in the UK for periods that varied between 12 and 24 months between 2004 and 2008 (MAC 2018: 15). Instead, stalling numbers are likely to have been produced by the accession, in 2004, of 10 countries to the European Union and a period of an especially weak Chinese Yuan.

### 3.1. The evolution of non-EU international student numbers in UK higher education: 1995/96 to 2016/17

In 2016/17, there were, in the HEIs sampled in this thesis<sup>7</sup>, 54,315 FTE first-year first-degree non-EU international students (141,705 for all years of study), 77,270 at PGT level (97,220) and 8,770 at PGR level (31,640). These numbers have increased phenomenally in the period covered in my dataset. In 1995/96, the earliest year in my dataset, there were 18,230 first-degree non-EU international students (43,250 for all years), 17,870 PGT (22,085) and 4,930 PGR (15,125), figures which were 2.98, 4.32 and 1.78 times larger respectively two decades later. The scale of this growth becomes particularly striking when compared to the growth of UK-domiciled student in the same period, which became 1.4 times larger for those enrolling on first-year first degree programmes, 1.26 times larger for those aiming for a PGT degree and 1.14 times larger for those undertaking a PGR course. These differing paces in the growth of non-EU international and UK-domiciled students have also been reflected in the numbers of non-EU international students as a percentage of the student body. In 1995/96, non-EU international students represented 6 percent of first-degree students in UK higher education, 16 percent for PGT, and 24 percent for PGR. In 2016/17, these figures were, 11 percent, 39 percent and 31 percent respectively.

Importantly, the growth in the numbers of non-EU international students has been nonlinear and non-monotonic, coinciding with distinctive phases in the development of national policy in relation to non-EU-international students, higher education more broadly, and changes in international student mobility globally and the countries students come from, as I show in the

<sup>&</sup>lt;sup>7</sup> For an exhaustive description of the sampling approach developed in this thesis, see Chapter 4 (Data and Methods).

following subsections. In fact, in 2016/17, the state of recruitment of non-EU international students in UK higher education was situated amidst a period of plateauing and dwindling non-EU international student numbers, coinciding with a tightening of immigration rules for students. Figures 2.1 and 2.2 show the evolution of non-EU international student numbers, in absolute numbers and proportions respectively, for all three levels of study.



Figure 2.2. Evolution of first-year non-EU international student numbers by level of study between 1995/96 and 2016/17.



**Figure 2.2.** Evolution of first-year non-EU international student as a proportion of total students by level of study between 1995/96 and 2016/17.

In figure 2.1, we observe that most of the growth in first-year non-EU international students has come from PGT students, which displays a sharper increase over the period at stake. Growth in PGT non-EU international students appear to take off in 1999/2000, followed by a period of plateau between 2003/04 and 2005/06, growing again in 2006/07 and dwindling slightly in the following academic year. Between 1999/2000 and 2003/04 numbers of first-year PGT non-EU international students grew from 18,920 to 46,830, increasing at an average of 5,582 students per year. Between 2003/04 and 2007/08, a period characterised by plateauing numbers and modest growth between 2005/06 and 2006/07, numbers increased from 46,830 to 53,315, growing at an average of 1,297 students per year. This period was then followed by a sharp increase between 2007/08 and 2010/11, with numbers growing from 53,315 to 74,950, increasing at an average of 5,409 students per year. Between 2010/11 and 2016/17, the numbers of first-year PGT non-EU

international students appear to decline in the first two academic years followed by a relatively stable period. In this period, numbers grew from 74,950 and 77,280, increasing at an average of 388 students per year.

In the case of first-degree students, patterns appear to be similar but with some particularities. Numbers also plateaued in the academic year 2003/04, showing a more stable pattern until 2007/08. Moreover, although growth appears to slow down from 2010/11, numbers do not seem to decline again until 2013/14. Between 2013/14 and 2016/17, numbers declined from 55,630 to 54,315, dwindling at an average of 438 students per year. Similarly, the numbers of PGR students also plateaued and even declined modestly between 2003/04 and 2005/06. Numbers continued to grow at varying rates until 2014/15, when they experienced a sudden drop. Between 2014/15 and 2016/17, numbers decreased from 10,130 to 8,775, declining at an average of 678 students per year.

We observe similar patterns when we look at the evolution of first-year non-EU international students as a proportion of total students, yet again with some qualifications (figure 2.2). Again, we see that PGT students have experienced the highest growth in the period at stake. In the beginning of the period, PGR was the level of study with the highest proportion of non-EU international students, followed by PGT and first-degree. However, at the end of the period, PGT was the level of study with highest numbers of non-EU international students as a share of the student body. As in figure 2.1, we observe a plateauing of the numbers between 2003/04 and 2005/06, followed by a period of growth that appears to slow down in 2010/11. It is also important to highlight the sharp decrease that we observe between 2015/16 and 2016/17, with numbers of non-EU international students as a share of the student to 38.8 percent. This is likely to be due at least partly to the introduction of master's degree loans for EU and UK-domiciled students in 2016/17, which coincided with a substantial increase in the number of EU and UK-domiciled students in PGT courses (Adams et al. 2019).

Similarly, for first-degree students, we see a sudden drop of numbers of non-EU international student as a percentage of total students between 2003/04 and 2005/06, from 8.3 percent to 7.3 percent. This period is followed by a period of growth with intermittent years of plateauing, declining again from 2013/14 onwards. Between 2005/06 and 2012/13, the numbers of non-EU international students as a percentage of total students grew from 7.3 percent to 12 percent, when these numbers reached their highest point. Then, from 2012/13 to 2016/17, numbers declined from 12 percent to 11 percent.

The evolution of numbers of non-EU international PGR students as a percentage of total students show less stable patterns. After a period of growth between 1999/2000 and 2003/04 – from 25.7 percent to 32.5 percent–, numbers appear to follow a pattern of growth and decline between 2003/04 and 2014/15, with numbers fluctuating between 30 percent and 34 percent. There is a final period of decline between 2014/15 and 2016/17, with numbers of non-EU international students as a share of total PGR students declining from 34.1 percent to 30.8 percent.

The numbers above show that the recruitment of non-EU international students in the period under study has had intermittent periods of overall growth, stagnation and decline. In the following lines, I develop a periodisation that may help us explain these patterns.

#### 3.2. The Diagnosis phase (1995/96-1999/2000)

The first two academic years in the dataset I analyse in this thesis, coinciding with the last two years of John Major's premiership, I label 'the diagnosis phase'. These years are characterised by policy efforts seeking to identify and respond to what were regarded as policy problems in higher education, and in the public sector more broadly. This period of diagnosis can be seen as the culmination of 20 years of 'radical change in British higher education' (Williams 1997: 275), a period where policy-makers decided to tackle the issues and contradictions deriving from these 20 years of change. In particular, this period crystallised the 'belief in the efficacy of market forces

and individualism, a suspicion of social engineering and a principled objection to trade restriction' (Elliot and Booth 1998: 32).

This period is characterised by underfunding, with a substantial reduction of State funding per student as the Government had committed to 'expansion, but abandon[ed] tying numbers to a fixed unit of resource thus opening the way to expansion at marginal costs' (Michael Shattock 2012: 245). The expansion of enrolments in higher education between 1989 and 1994 by over 50% was not matched by expenditure per student, which fell by 30% (Williams 1997). This, according to Michael Shattock, paved the way to the eventual introduction of domestic tuition fees (Shattock, 2012: 245).

This milieu shaped the political understanding of non-EU international students in UK policy-making, which, according to Elliott and Booth, was characterised by 'the absence of any explicit reference to internationalism, other than H[igher] E[ducation as a tradable activity' (Elliott and Booth 1998: 33). This was also reflected in the publication of the Dearing Report in July 1997 (The National Committee of Inquiry into Higher Education 1997). This report was commissioned in 1996 by John Major's government, although it had been 'agreed by both major political parties in recognition of the sense of crisis in UK higher education' (Watson 2007; in Lunt 2008: 742), particularly with regards to the funding of the sector. While the report is widely known for suggesting the introduction of tuition fees for UK-based students (cf. Ryan 2005), it also provided a diagnosis -or even a forecast- of the role non-EU international students were already playing in the sector. The report argued that an 'increasingly important economic contribution of higher education is as a generator of foreign exchange earning [via recruiting non-EU international students]' (The National Committee of Inquiry into Higher Education 1997: 78) and that 'the aspiration of many of the developing countries to improve the skill levels of their populations also provide opportunities for UK higher education [...]. For the long term the greatest new opportunities for attracting overseas students to this country may lie at the postgraduate level'

(ibid.: 69). Dearing's prediction is consistent with what we have observed in subsection 2.1., as the numbers and percentages of students who are non-EU international have grown the most at the PGT level.

This "diagnosis" of the situation of higher education in the UK paired with the recognition of the role non-EU international students may play in the funding of the sector may have shaped the policies put forward by Tony Blair –elected Prime Minister in 1997 right before the publication of the Dearing report– in 1999, seeking to increase recruitment (Blair 1999; Blinder and Fernández-Reino 2014; Merrick 2007). This may explain why, as shown in the previous subsection, the numbers and percentages of non-EU international students remained relatively flat between 1995/96 and 1999/2000, the year when they started to take off. In the following subsection I explain Blair's policies, framing the expansion we have observed in the preceding subsection.

### 3.3. New Labour and the expansionary phase of the first Prime Minister's Initiative (1999/2000-2003/04):

As argued by Sylvie Lomer, 'the first explicit policy intervention' (2017: 2) regarding non-EU international students in UK higher education was launched in 1999 at the London School of Economics by the then Prime Minister Tony Blair (Blair 1999). This intervention, labelled as the Prime Minister's Initiative for international education (PMI) had the following features:

'[It] aimed to attract 50,000 additional higher education international students to the UK within 6 years (British Council 1999), and to make Britain "the first choice for quality" (British Council 2003: 14). This was to be achieved by a "package of measures" (Blair 1999) including: revisions to the immigration rules for students (Roche 2000); the development of the Education UK brand as part of a professionalised approach to

marketing higher education; and the expansion of the Chevening scholarship<sup>8</sup> scheme (Blair 1999)' (Lomer 2017: 53).

Most importantly, the immigration changes announced in the PMI generated a more welcoming environment for non-EU international students essential to the growth in recruitment experienced subsequently. These changes included, inter alia, 'simplified visa procedures, by granting a visa for the duration of a programme of study, instituted a right to work along-side full-time study (Roche 2000) and facilitated switching between visa categories to work after graduation' (Lomer 2017: 53). Indeed, as stated in a report from the Migration Advisory Committee, the post-study work route was introduced in 2004 (MAC 2018). This, which was part of Labour's 'efforts to attract a highly skilled workforce' (Beauvallet 2014), may have had a positive impact in the recruitment of non-EU international students in UK higher education.

The PMI can be regarded as a paradigmatic New Labour policy, which one of its key characteristics, as put by Norman Fairclough, 'is a rhetoric of reconciliation, that is 'economic dynamism as well as social justice', and 'enterprise as well as fairness' (Fairclough 2000: viii). The representation of international students during New Labour is a paramount example of this 'rhetoric of reconciliation'. In the 2003 higher education White Paper *The Future of Higher Education*, the recruitment of international students are seen as 'providing economic benefit', categorised as 'exports of education' that, in turn, bring 'money that feeds into our institutions and helps open up opportunities for more people to study' (Department for Education and Skills 2003: 65).

The introduction of the first Prime Minister's Initiative has been widely recognised as a success, especially in terms of recruitment targets. Tony Blair himself wrote in The Guardian in 2006 that the UK did 'not only reached this target but beaten it by an extra 43,000 students' (Blair 2006; in Lomer 2017a: 169). However, in spite of this welcoming environment generated by the

<sup>&</sup>lt;sup>8</sup> The Chevening scholarship was created in 1983 in order to assist Commonwealth students seeking to study in UK universities and acting as a compensation for the introduction of full-cost fees for non-EU international students (Williams 1984).

PMI, my empirical analysis shows that, between 2003/04 and 2007/08– between the end of PMI1 and the beginning of PMI2– there was a stalling of the numbers of non-EU students coming to the UK. This, as I show in the following section, cannot be attributed to UK policy.

### 3.4. The first plateau period (2003/04 -2007/08)

As shown above in subsection 2.1, growth in student numbers during the period covered by PMI1 was not particularly linear, as numbers show signs of declining at the end of the period. There is no particular reason, UK policy-wise, that may explain this plateauing. However, there were some changes elsewhere that may explain these patterns.

First, in May 2004, 10 European countries joined the European Union: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia (Dedman 2009). This meant that, overnight, prospective students from these countries were considered as belonging to the European Union, subject to the same fee regime than UK-based students. Before 2004/05, these 10 countries represented a relatively important share of the non-EU student population. Table 2.1 shows the numbers of first-year students from these countries in the academic year 2003/04, before accession to the EU, and the share they represented of the total non-EU international students.

Level of study	Ν	% of total non-EU
First degree	1,230	3.9
PGT	1,085	2.3
PGR	190	2.5

**Table 2.1.** Numbers of first-year students from the 10 countries that accessed the EU in 2004 in the academic year 2003/04. Numbers are shown as absolute numbers and as percentages of total non-EU students.

Moreover, there was also a significant decline of Chinese students entering UK higher education in the academic year 2005/06. Table 2.2 shows the differences in Chinese student numbers between 2004/05 and 2005/06 for all levels of study.

Level of study	2004/05	2005/06	% Change
First degree	8,500	6,975	-17.9
PGT	14,320	13,000	-9.3
PGR	1,420	1,260	-11.5

**Table 2.2.** Numbers of first-year Chinese students for the academic years 2004/05 and 2005/06 and percentage change between the two years.

This decline in Chinese students could be due to changes in the exchange rates between pound sterling (GBP) and the Renminbi (also known as the Chinese Yuan, CNY). Previous research has shown that 'a depreciation of Sterling [...] makes UK higher education fees more affordable, [representing] an increase in enrolments' (London Economics 2017: 12). In fact, in terms of exchange rates' yearly averages, 2004 and 2005 had historical highs for the period between 1990 and 2016, with Chinese students requiring around 15 CNY to purchase one GBP (OFX 2019). In comparison, a Chinese student in 2019 needs 8.7 CNY to purchase one GBP (ibid.).

#### 3.5. The expansionary phase of the second Prime Minister's Initiative (2007/08-2010/11)

While the second Prime Minister's Initiative (PMI2) was launched in 2006 (Lomer 2017: 53), my empirical analysis show that the growth that could be attributed to this policy did not start until 2007/08. As shown in the previous section, between the end of PMI1 and the beginning of PMI2, there was a plateauing in the numbers of non-EU international students coming to the UK, most likely to be caused by changes elsewhere.

The PMI2 represents a continuation of PMI1, which was deemed as 'very successful' by the British Council, exceeding its recruitment target by 43,000 students (British Council and Department for Business Innovation and Skills 2010: 4). In this case, however, the PMI's emphasis on recruitment targets was replaced by:

'[A] more sophisticated, longer-term endeavour to embed the increases in international recruitment in a broader network of partnerships and institutional activities [...], demonstrating a more nuanced understanding of the education marketplace' (Lomer 2017: 58).

In the case of PMI2, the policy had the following targets: 1) an additional 70,000 non-EU international students in UK higher education, 2) an increased number of countries sending more than 10,000 individuals per year to the UK, 3) improvements in student satisfaction to bring about 'positive change' in the perception of students considering the UK as a study destination, and 4) a greater number of partnerships with third countries (DTZ 2011: i). An example of the latter was the 'UK-India Education Research Initiative', which aimed 'to improve educational and research links between the UK and India' (BBC 2006).

However, during this period, there were also substantial changes to migration policies, particularly at the end of the period. In fact, it could be argued that, throughout the PMI1 and PMI2 phases, there were several events that shaped public perceptions of migrants, which in turn were capitalised on by different ends of the political spectrum and impacted regulations regarding the entry of non-EU international students to the UK and elsewhere (Levatino et al. 2018). In the middle of PMI1, 'the terrorist attacks of 9/11 [and in London on 7 July 2005] changed the equation, and the tightened visa requirements made it more difficult for students to study in the USA' and the UK (Choudaha, 2017: 826). In 2008, a scandal broke when it was found that several students were undertaking courses –'mostly [in] private language colleges' – which were 'really a means to low-skilled employment' (UK Border Agency, 2008; in Lomer, 2017: 63). Moreover, the

financial crisis and subsequent austerity policies, particularly since the election of the Coalition government in 2010, brought about an unwelcoming environment for migrants, which in some cases were seen as illegitimate competitors in the labour market.

Moreover, the Home Office introduced the Point-Based System (PBS) in 2006, which aimed to 'better [identify] and [attract] migrants who have most to contribute to the UK', have 'a more efficient, transparent and objective application process', and improve 'compliance and [reduce] scope for abuse' (Home Office 2006: 1). The Migration Advisory Committee (MAC) was also introduced in 2007, offering 'advice based on expert knowledge of the economy and labour markets' (Lomer 2017: 62). Notwithstanding, it was not until 2009 that the PBS route for students, known as "Tier 4", was introduced. Tier 4 was set up, inter alia, to tackle 'abuse'. Under the new system, universities and other institutions providing educational services (such as the private language colleges mentioned above) had to be accredited by organisations sanctioned by the Home Office (Beauvallet, 2014). The then UK Border Agency (now UK Visas and Immigration) 'introduced the "Highly Trusted Sponsor" (HTS) status, without which institutions would not be able to sponsor international students for visas' (Lomer 2017: 64).

There is evidence suggesting that the Labour government's approach towards non-EU international students toughened by the end of Gordon Brown's mandate, which could have been due to electoral proximity. Brown's Home Secretary, Alan Johnson, announced in 7 February 2010 a series of measures to tackle student visa fraud, including raising the required level of English, and a reduction of benefits –such as the hours students are allowed to work– to those individuals taking courses below degree level (BBC 2010). While these changes may be more relevant to the further education sector, we will see, in the following section, how the Coalition government extended some of these restrictions to other sectors of UK's higher education.

As seen in subsection 2.1, PMI2 since 2007/08 coincides with a significant growth in the numbers and percentages of students who are non-EU international, which could be attributed –

at least partially– to this renewed effort to increase non-EU international student recruitment in UK higher education. There is one exception, though. As seen in figure 2.2, the percentages of students who are non-EU international at the PGR level declined between 2007/08 and 2010/11 –although absolute numbers continued growing, as seen in figure 2.1. The most plausible explanation regarding this fluctuation comes from an increase in other EU and UK-based PGR students. The latter could be due to the 2007 financial crisis and subsequent unemployment, which may have made postgraduate research study more desirable to those that would be otherwise unemployed. Notwithstanding, this is necessarily a speculative argument.

# 3.6. The Coalition migration policy (2010/11-2016/17)

On May 6, 2010, a general election delivered a hung parliament that ushered in a Conservative-led coalition. David Cameron, the new Prime Minister, had pledged throughout his campaign that 'immigration [was] too high and [needed] to be reduced' with mechanisms such as 'setting an annual limit on the number of non-EU economic migrants admitted into the UK to live and work' (The Conservative Party 2010: 21). The Coalition government also proposed that the student visa system developed in the previous Labour government was 'the biggest weakness in our border controls' and promised, inter alia, to 'require that students must usually leave the country and reapply if they want to switch to another course or apply for a work permit', bringing the post-study work route to an end (ibid.). While the PMI2 was meant to end in 2011, the election of the Conservative-led coalition government paved the way to a new political milieu regarding non-EU international student recruitment. Thus, conceptually, I have decided to distinguish the previous phase of PMI2's expansionary period from the election of the Coalition government onwards.

As argued by Lomer (2017), there are substantial differences in migration policies from New Labour and the Conservative-led Coalition government, even when taking Gordon Brown's position of student visa abuse into account. As stated by Lomer herself:

'The Blair policies, while still oriented towards reducing illegal migration, emphasised making student migration easy and attractive, by targeting part-time work, application procedures, access by dependants and poststudy work opportunities. This included the introduction of the pointsbased migration system. In contrast, the Brown government began a process of tightening up requirements around English language, eligible institution and part-time work [...]. The Coalition Government continued this process, under the broader aim of making substantial reductions to net migration' (Lomer, 2017: 65).

The home secretary Theresa May announced, in March 2011, a package of measures to be made effective by April 2012, including the closure of the post-study work route (Home Office 2011). Moreover, English language proficiency level had to be proven via "secure tests" [...] and "targeted" spot-check interviews at the border were also introduced' (Lomer, 2017: 66). Moreover, greater emphasis on inspections of whether institutions were complying with their Tier 4 visa requirements resulted in 6 universities having their licenses to recruit non-EU international students suspended between 2011 and 2015. Interestingly, all these HEIs were given their university titles after 1992. Table 2.3 shows the universities that had their licences to recruit non-EU international students removed, the date when this happened and the date their licences were restored. Moreover, the table shows, within brackets, the sources containing the information about HEIs' licence suspension and restoration.

HEI	Licence suspended	Licence restored
Glasgow Caledonian	21 April 2011 (Whitehead 2011)	11 May 2011 (UK Visa Bureau 2011)
London Metropolitan	29 August 2012 (London Met 2012)	9 April 2013 (BBC 2013)
Glyndwr	24 June 2014 (Home Office 2014)	24 November 2014 (Havergal 2014)
West London	24 June 2014 (Home Office, 2014)	Unknown
Bedfordshire	24 June 2014 (Home Office, 2014)	Unknown
Buckinghamshire New	9 March 2015 (Havergal 2015)	Unknown

**Table 2.3.** Institutions that had their licence to recruit non-EU international students revoked between 2011 and 2015.

There were different reasons why these HEIs' licences were revoked, all of them related to what the Home Office considered to be 'serious concerns' about whether the students they recruited were 'genuine' and that met 'the UK's immigration requirements' (Home Office 2014). For instance, in the case of Glyndwr University, the government had concerns that hundreds of their students had 'invalid or questionable English language qualifications' (Havergal 2014). In the case of Buckinghamshire New University, too many of their accepted non-EU international students had had their visa refused by the Home Office (Havergal 2015). In this sense, one of the requirements to become a Tier 4 sponsor institution is to have 'a visa refusal rate of less than 10 per cent' (MAC 2018: 11).

Moreover, the government decided to allow students from some countries –labelled as 'designated low-risk nationalities' (MAC 2018: 16)– that attended Highly Trusted Sponsors not to be required to provide certain evidence about 'maintenance funds or educational qualifications' (ibid.). Remarkably, as this list did not include India, this may have brought about 'negative press coverage in India about attitudes in the UK to Indian students' (ibid.: 34). As highlighted by the MAC, the Indian Times included a headline stating 'students outraged as the UK excludes India from relaxed study visa rules' (ibid.). Interestingly, a strikingly similar situation can be found in the case of Indian students in Australia. As suggested by Tan and Hugo (2017), a set of restrictive migration policy developments in Australia, such as 'a greater emphasis placed on higher qualification, higher English language ability, and relevant skilled work experience' together with 'incidents of violence, racism, discrimination, and corrupt education providers saw a drastic reduction in Indian student enrolments, which declined by 68.4% from 2008/2009 to 2009/2010' (ibid.: 11).

Finally, it is important to highlight how the British government, during the Coalition and the Conservative government elected in 2015, supported a set of policies that had a high level of 'stratification', using Esping-Andersen's concept that refers to the '(status) hierarchy produced by welfare state policies' (Esping-Andersen 1990; in Willemse and de Beer 2012: 107). In the case of policy-making related to non-EU international student recruitment, these policies either penalised newer universities -sitting at the bottom of this status hierarchy- or benefitted older ones. Together with the fact that some new HEIs had their licences to recruit non-EU international students revoked, the Government introduced, in 2016, a pilot scheme that 'streamline[d] the process for international students looking to study a master's course of 13 months or less in the UK' (MAC 2018: 14). The universities that benefitted from this pilot in 2016 were Oxford, Cambridge, Bath and Imperial (ibid.). Eventually, this pilot was extended to other 23 universities in 2017, and the majority of these 23 universities were either from the Russell Group (N=15) or pre-1992 (N=6), with the exception of two post-1992 universities: Harper Adams and the Royal Central School of Speech and Drama. This pilot allowed these rather old and prestigious universities to allow their students to 'switch to a work visa and take up a graduate role, by allowing them to remain in the UK for six months, rather than the usual two or four months' (ibid.: 15). Due to the fact that these policies, executed under the Conservative-only government elected in 2015, represent an absolute continuity to those implemented under the Conservative-led Coalition I have decided to label both terms "Coalition migration policies". As shown in subsection 2.1., the

numbers and percentages of non-EU internationals students show signs of plateau –and even decline– since 2010/11, coinciding with the policy phase explained above.

### 4. Conclusion

In this chapter, I have provided 1) a summary of the evolution of the meanings and scale of international student mobility to UK higher education since the middle ages to the 1990s; and 2) a periodisation of non-EU international recruitment patterns in relation to policy changes in the UK and socioeconomic and political changes elsewhere since 1995/96 –the period analysed empirically in this thesis.

First, I have shown that, in the last 8 centuries, the mobility of students across geographical regions –and nation states, when these emerged– has suffered a myriad of changes, shaped by the socioeconomic and political milicus of their times. In medieval Europe, mobility of students and teachers was fairly common –although less so in England– a situation that was reversed in early modern Europe, characterised by religious wars which brought about generalised suspicion of intellectual activities coming from abroad. Later, during the Empire, UK universities became paramount institutions to foster Imperial ideologies among subjects from the colonies, particularly among the ruling classes. While this understanding of the provision of education to foreigners left its traces throughout the 20<sup>th</sup> century, the meanings of international student mobility to the UK progressively shifted, first as an exercise of capacity building in the context of decolonisation and later as an economic activity that would compensate for the austerity measures introduced by Thatcher's government was to charge students coming from outside the European Union – formerly, the European Economic Community– the full cost of their education, a decision that triggered a market response among universities. This market response was later capitalised by

successive governments, particularly since the late 1990s, which conceived the delivery of higher education to non-EU international students as a revenue-generating activity.

Second, I have also shown empirically that, between 1995/96 and 2016/17, the numbers – and percentages– of students who are non-EU international have grown phenomenally, although in a non-linear and non-monotonic fashion. There have been two expansionary phases between 1999/2000 and 2013/04, and 2007/08 and 2010/11 followed by two period of stagnation, and in some cases decline, between 2003/04 and 2007/08, and 2010/11 and 2016/17. These patterns coincide with a set of policy phases in the UK and socioeconomic and political changes elsewhere. These policies, I have shown, respond to Hollifield's concept of the "liberal paradox" (2004), which 'lies in the opposition between, on the one hand, domestic security concerns that moves states to control their borders and, on the other hand, international economic forces that push towards free circulation of goods, services' (Levatino et al. 2018: 367). I have also discussed the particular detrimental effect on recruitment patterns that the student migration policies introduced by the Conservative-led coalition government had. In this sense, I have highlighted how the British government supported a set of policies that fostered high level of 'stratification', using Esping-Andersen's concept that refers to the '(status) hierarchy produced by welfare state policies' (Esping-Andersen 1990; in Willemse and de Beer 2012: 107).

# Why do international students move to UK higher education institutions?

#### 1. Introduction

In the previous chapter, I have discussed the history of international student mobility to the UK. I have also put forward the policies developed within the UK that may have affected non-EU international student mobility to the country during the period analysed empirically in this research (1995/96 – 2016/17): inter alia, student migration policies, targeted recruitment initiatives and brand development. However, domestic policies alone do not wholly explain the shape recruitment patterns take. As argued by Levatino and colleagues, '[international student] flows can be strongly influenced at origin [...] by policies related to higher education systems [...] other issues, such as aiding countries of departure to fight against brain drain or strategies of country branding and promotion, may also be involved' (2018: 368). Moreover, the motivations of prospective international students and their families, and how these relate to wider socioeconomic and political contexts, may play a substantive role in explaining mobility patterns. This chapter aims to synthesise the research that deals with the latter issues, and puts UK's higher education under the microscope, assessing what others have said about who moves to the UK, where do they go -and where do they want to go- in terms of institutions and geographical locations and why. I also review research that deals with international student mobility elsewhere, as it may allow us to understand the drivers bringing about mobility in a 'global space of international students' (cf. Börjesson 2017). The focus of this section are students themselves and how they interact with macro, meso and micro socioeconomic and political dimensions that lead them to undertake the complex enterprise of studying in a UK institution.

There is a large body of research on students crossing borders to pursue a degree in higher education seeking to elucidate both the structural and individual forces that shape student's decisions to move. Traditionally, these forces are usually conceptualised as "push" and "pull" factors, the former 'operat[ing] within the source country and inititat[ing] a student's decision to undertake international study; and the latter being 'factors [...] within a host country to make that country relatively attractive to international students' (Mazzarol and Soutar 2002: 82). These factors interact with individuals' realities and their circumstances and understandings of the role of gaining a degree abroad and the consequences of moving for study purposes. As mentioned by Perraton (2014), 'individual students also travel for idiosyncratic reasons, to follow an actual or potential partner, or as a response to an unconsidered opportunity' (ibid., 9). In this sense, this chapter first puts forward a synthesis of the literature discussing what "pushes" students to undertake higher education abroad. Second, I review the literature that deals with UK higher education as a popular destination to mobile students. Third, I attempt to answer the question "where do non-EU international students move within the UK in terms of higher education institutions (HEIs)?". As explained in chapter 2, this represents the explanandum of this thesis. A review of the existing literature produces three answers to this question. The mobility of non-EU international students to UK HEIs is shaped by 1) perceptions of HEIs' quality and reputation, 2) desirability of HEIs' geographical location, and 3) the strategies HEIs follow to make their provision more attractive to non-EU international students, from targeted recruitment practices to subject offering. In turn, these lines of argument found in the literature allows me to develop the hypotheses that, together with the research questions produced in the previous chapter, will guide my empirical analysis. Finally, I provide a theoretical reflection on how UK HEIs compete for non-EU international students in a context of national and global competition for fee-paying international students. I argue, reviewing the work of Marginson (2006, 2008), that UK higher education can be understood as a "field of power" (Bourdieu 1993), in which universities, hierarchically organised within this field, compete for resources. In turn, their position within this

hierarchy shapes the way they engage in recruitment drives of non-EU international students and the size this recruitment takes.

#### 2. Why do students leave their home countries? Push factors

One of the earliest attempts to explain international flows of students argued that 'excess demand for third level education in the developing countries is one of the most important determinants of the flow of developing country [sic] students to the advanced countries [sic]' (Lee and Tan 1984: 687). In their study, Lee and Tan put forward two elements that are widely present in debates around the international mobility of students: 1) that 'a lack of access to higher education among many countries in Asia and Africa has been a key driver for much of the student flows that has taken place over the second half of the twentieth century' (Mazzarol and Soutar 2002: 82) and 2) that there are power relations in the global higher education landscape, where both nations and institutions differ from each other in terms of prestige and outcomes from higher education, which in turn affects 'the cross-border effects that one nation or institution generates in other nations or institutions' (Marginson and Van der Wende 2007:18).

Indeed, debates around international student mobility tend to be framed within a global context of inequalities between nations –predominantly between high and low income countries–, emphasising that the lack of development of domestic higher education systems in low-income countries "push" their students to seek opportunities abroad. Notwithstanding, as Findlay highlights, in recent decades, there has been a 'global increase in the number of universities [...] and yet, student migration [...] has become one of the major forms of contemporary international mobility' (Bhandari and Blumenthal 2009; in Findlay et al. 2012: 118). Thus, the underdevelopment of a given higher education system might only partially explain mobility patterns. Other possible explanations include the 'prevailing levels of economic stagnation or decline in [students'] home countries' (Maringe and Carter 2007: 465). In this sense, qualitative research has reported that

some students undertaking higher education in the UK do so 'desperate to escape poverty and human degradation' (ibid.).

Research suggests that the issues above were also relevant in the past. For instance, a seminal study by Mary McMahon (1992) on global international student mobility in the 1960s and 1970s suggests that the economic and social development at home affects the flow of students between nations. According to McMahon, the field of international student mobility in these two decades was characterised by 'strong participation by students from Third World [sic] nations and the popularity of five industrialized host nations', including the United Kingdom (ibid.: 465). Her statistical model suggests that:

Per capita economic strength in all instances had a negative, not positive, association with high percentages of students overseas. [...] Involvement in global trade [of home countries] was positively association with overseas study [and] state priority on education was an important variable and in all instances was found to be positively associated with higher percentages of students overseas' (ibid.: 473)

Similarly, Zheng (2014), studying the factors that may explain international student mobility to the UK between 1994/95 and 2007/08, argues that 'GDP per capita is negatively associated with international student flows'. Moreover, issues such as exchange rates, colonial and language links and the first Prime Minister's Initiative –explained in chapter 2– have influenced these patterns.

Indeed, the notion that most international student mobility happens from the Global South to the Global North is recurrent in the literature (Börjesson 2017; King and Sondhi 2018; Perkins and Neumayer 2014). In this sense, King and Sondhi argue that, 'built upon histories of colonialism and underdevelopment, and on economic and geopolitical networks of power (Hansen 2014)' the Global North is assumed to be the referent (2018: 177). Regarding higher education, they claim that 'the "correct template" is naturally read as the Global North as the historically default location of theory and knowledge' (Spivak 2009; in King and Sondhi 2018: 177). This, at least partially, may explain the popularity of UK higher education in the current global space of international student mobility, an issue that will be explored in the following section.

However, as King and Sondhi suggest, understanding global student mobilities as unidirectional between the Global South and the Global North 'is an oversimplification: there are substantial I[nternational] S[tudent] M[obility] flows between countries of the Global North, and within the South too' (ibid.). Indeed, as we will see in this research's empirical chapters, there is a significant representation of students coming from 'high-income' countries in UK higher education, using the World Bank's terminology (World Bank data team 2016), particularly from the United States. The literature identifies different push factors that may explain mobility among this specific subset of students. First, King and Sondhi report that students from the UK that decide to move abroad frame their mobility 'around individual aspiration and accomplishment, including references to travel-based tourism and "gap" years' (2018: 188). In contrast, the same authors argue that mobile Indian students articulate their discourses around '(under)development [sic] whereby student migration is seen as a livelihood strategy or as a means of accumulating money for remittances' (ibid.). Similarly, in a study by Waters and Brooks of 85 UK students and graduates with experiences of higher education abroad, the researchers report that 'going overseas offered opportunities for "excitement", "glamour", and "fun" and a way of deferring the inevitable encroachment of a "career" (Waters and Brooks 2010: 226). Notwithstanding, these researchers also report, in a paper from 2009, theorise that, for UK applicants seeking to study abroad, mobility is conceived as a 'second chance of success' (2009). In this sense, 'an elite overseas education was perceived as an "honourable substitute" for an Oxbridge degree in a highly stratified higher education sector and an increasingly competitive graduate labour market' (ibid.: 1098).
# 3. The popularity of UK higher education among international students

Previous research suggests that the UK enjoys a good reputation among prospective mobile students. Rudd and colleagues, in a qualitative study exploring Chinese students' decision-making processes about where to study, report that 'the UK has a very positive pull factor' (2012: 133). Their participants, drawn from a business school in the UK, indicate that they perceive UK higher education to be 'better' than in other countries (ibid.: 134). Moreover, issues such as English being UK's lingua franca, also make the UK particularly attractive to this set of students (ibid.).

Rudd et al.'s (2012) findings are consistent with research by Maringe and Carter (2007), in which they identify a range of "push and pull" factors among African students studying in two universities in the South of England. Their participants, coming mostly from Southern African countries with past colonial ties with Britain, believed that 'the UK HE qualification enjoys international recognition and that acquiring it will be a life time investment and opportunity' (ibid.: 466). One participant even suggested that 'no country in this world [...] looks down upon a British higher education qualification' (ibid.).

However, where does this reputation come from? Marginson offers a compelling answer using Gramsci's concept of hegemony, defined as 'the "spontaneous" consent given by the great masses of the population to the general direction imposed on social life by the dominant fundamental group' (Gramsci 1971: 12; in Marginson 2008: 308). According to Marginson, current hegemonic 'exemplars of ideal practice' reside in Anglo-American higher education (ibid.: 311). While he states that 'the United Kingdom is a very junior partner' of American higher education, he suggests that 'the role of English, UK research strength and the worldwide authority of Cambridge and Oxford' may contribute to UK's global reputation (ibid.). Marginson's argument is consistent with Maringe and Carter's research, who suggest that there is a 'positive brand association through which UK HE appears to be based on the Oxbridge perception' (Maringe and Carter 2007: 468). One of their participants reports that, despite studying in the University of Derby –a post-1992 institution–, their family would refer to them as 'those educated from Oxford' (ibid.). Research by Beech (2014) exploring the role of place in international students' choices also reported the power Oxbridge and a handful of other UK universities had in the imaginaries of these students. One of Beech's participants stated: 'when you say "British Universities" there are two main categories; one is Oxford, Cambridge, London School of Economics and UCL I think, and... everything else; (ibid.: 173).

As Marginson, Altbach also discusses the domination of English language, which 'moves world science toward hegemony led by the main English-speaking academic systems' (2013: 2). This, according to Altbach, creates a global milieu that forces non-English academic systems to conform to 'the influence of the major English-speaking academic systems, particularly of the United States and the United Kingdom' (ibid.: 4). In a similar fashion, Börjesson argues that 'English holds a hyper-central position in the system [of international student mobility]' (2017: 1264). Interestingly, he also suggests, citing the work of Heilbron (2000), that the dominance of English is epitomised by the distribution of translations: 'while around 40% of all translations in the world are from English, translations only account for 5% of all publications in the UK' (Börjesson 2017: 1264). It is not surprising, then, that David found that the number of countries' HEIs ranked in *Times Higher Education* world rankings is largely a function of the size of the population of English-speaking countries (2016).

Beech also argues that UK's place in prospective mobile students are influenced by 'postcolonial discourses of power and academic imperialism' (ibid.), drawing from Madge et al.'s concept, defined as the 'considerable cultural, economic and emotional value' that is attained from gaining a qualification from the former metropole (2009: 39). Beech goes on to argue that UK's recent marketing strategies have tried to capitalise these colonial imaginaries:

'The conception of the UK as providing a superior education is in part built through current marketing campaigns and strategy, but is likewise a remnant of the UK as a powerful and colonising nation that has infused the social imaginary, influencing international and overseas students. Thus the British Council's marketing strategies –and those of UK universities more broadly– while positioning the UK in a postcolonial context, subtly draw on a persistent imaginative geography of British imperial power' (Beech 2014: 173)

In a similar tone, Sidhu argues that discourses around recruitment drives in the UK seek to reinforce 'Britain's traditional role as colonial educator of an international elite' (Sidhu 2002: 22).

Nevertheless, other authors have suggested that idiosyncrasies found in UK higher education that are not necessarily related to its role as postcolonial power in an English-dominated world may also explain its popularity. For instance, Davey argues that Chinese students are motivated to study in the UK because of the availability of one-year postgraduate programmes (2005). This is an issue that has been recurrent in the past 40 years. For instance, right after the introduction of full-cost fees for non-EU international students in 1979, the London School of Economics sent its then Dean of Graduate Studies, Robert Orr, to the United States to recruit American students, fearing that 'the Government's decision to withdraw the subsidy from foreign students' fees will reduced the number of students applying to come to Britain' (Mackie 1980: 4). Orr's sales pitch included the fact that 'in return for spending a year in London, the students can qualify for a Master's degree' (ibid.).

Interestingly, research carried out before the election of the Conservative-led coalition government suggests that the loosen up of requirements for issuing student visas made UK higher education particularly attractive. As reported by Maringe and Carter, their participants spoke about 'a simple and straight forward application process' (2007: 466). One of their participants compared UK's student visa system with the one found in the US in the following terms: 'I tried applying to the US and the process is horrendous' (ibid.). Similarly, Rudd et al.' research reported that their participants thought that 'it [was] easier to apply for the visa in the UK compared to other countries' (2012: 134). Similarly, Binsardi and Ekwulogo reported that, after 'international recognition', 'ease of university entrance and immigration procedures' was one of the most important factors for prospective mobile students to apply to the UK (2003: 321), particularly since the tightening of immigration procedures in the US after '9/11' (Rudd et al. 2012: 134). Considering these conditions, it is not surprising that when immigration procedures tightened, as explained in chapter 2, after the election of the Conservative-led coalition government, the number of non-EU international students coming to UK higher education stagnated.

Finally, Maringe and Carter also report that the narrowness of undergraduate curricula in the UK represented a competitive advantage for some of their participants in comparison to US broadness: 'the nature of first degree programmes [in the US] is so general; you have to do business studies, English, mathematics, American history and other things as part of the under graduate programme' (2007: 467).

# 4. Choice of institution in UK higher education: the dominance of "world class" discourses

In the previous section, I have discussed that global mobility flows are partly shaped by prospective mobile students' imaginaries that UK higher education is "better" than elsewhere, a perception that is shaped by global power relations in the context of postcolonialism. A phenomenon resonates with Teichler concept of 'vertical mobility', that is 'the move of a person to a country and to an institution of higher education which is viewed to be superior in academic quality than the country and the institution where this mobile person comes from' (2017b: 191). This, in turn, impacts the distribution of mobile students not only globally but also within UK higher education (cf. Broecke 2015).

Several authors have already described the unevenness of the distribution of non-EU international students across UK higher education institutions. Stuart Tannock, in a monograph investigating issues of equity in the provision of higher education to international students in the UK, argues that 'top ranked universities in the UK [...] tend to be the universities that recruit the highest numbers of international students in the country' (Tannock 2018: 101). He goes on to argue that, in fact, these "top ranked" universities 'are in a position where they can typically count on being able to attract international students without having to do much proactively, simply because of the global reach of their world class reputations' (ibid.). The relevance of vertical differentiation in explaining the distribution of non-EU international students in UK higher education, understood as a form of diversity that 'distinguishes HEIs by "quality, reputation and prospective status of graduates" (Teichler 1996: 118; in Marginson 2017: 1), is also highlighted by Findlay (2011). He states that, in the United Kingdom, 'there is also a statistically significant association between the academic status of a university and the size of the foreign student population', which is 'much greater in the United Kingdom' than, for instance, the United States (ibid: 176).

Soo and Elliott (2010) have produced similar findings in a project investigating the factors affecting choice of UK institution among non-European international students using a demand function, understood as depending 'on the price and quality of the product being purchased' (ibid.: 554). Using UCAS<sup>9</sup> data, league table data, tuition fee levels and the characteristics of a sample of 97 UK universities, they explore what may explain demand for Business and Engineering undergraduate degrees among non-EU international students. They conclude that the quality of the education in a given institution – 'measured using information from the Times University Guides' (ibid.)–, its proximity to London and its popularity among home applicants all have a significant and positive relationship with international demand. In terms of price, they conclude

<sup>&</sup>lt;sup>9</sup> "UCAS" stands for the Universities and Colleges Admissions Service, a UK-based organisation that oversees applications to UK higher education institutions.

that the relationship between fee levels and applications is not linear, suggesting that international female Business applicants 'appear to be more price-sensitive', with 'positive price elasticity in the majority of high-quality universities, and negative price elasticity in the majority of low-quality universities' (ibid.: 561). The latter is indeed a very interesting finding in terms of understanding international higher education as a competitive field, in Bourdiesian terms (1993). As the authors claim, 'among better universities, higher prices act as a signal of quality, whereas among low quality universities, higher price reduce the number of applications' (Soo and Elliott 2010: 561). The margin of manoeuvre of dominant universities within the field is greater than those subjugated to the dynamics imposed by the dominant group (cf. Marginson 2008). Equally, these results could support theorisation from the side of the students: applicants at "better universities" –i.e. institutions with greater levels of different forms of capital (economic, symbolic, cultural and social)– may be more likely to come from more privileged backgrounds, hence less likely to be price-sensitive. The fact that female applicants are more price-sensitive than their male counterparts may indicate that this in fact the case.

Notwithstanding, there are some problems with Soo and Elliott's (2010) work. First, they use UCAS data as an accurate picture of the number of applicants to UK institutions. Unfortunately, we know that some universities accept undergraduate applications from non-European international students outside UCAS. A 2013 government report estimated that, in 2011/12, only 40 percent of non-EU undergraduate applications were processed by UCAS (HM Government 2013). Second, Soo and Elliott loosely associate "quality of education" with league table position. This relationship is highly problematic as league tables do not tend to measure quality of provision. Instead, the Times Good University Guide, the league table they use, measures teaching quality by using a proxy measure of student satisfaction from the National Student Survey (NSS) (The Sunday Times 2018). Moreover, this proxy measure of teaching quality only represents a fraction of the total score calculated to produce the Times league table, which also includes indicators that have nothing to do with teaching quality, such as research volume or entry standards (ibid.). Instead,

they should regard league table data not as a measure of institutional quality but as a proxy indicator of market value, used by prospective students as a marker of perceived reputation (Hazelkorn 2008).

Similarly, Cebolla-Boado, Hu and Soysal, in a paper researching what explains the distribution of Chinese students across British universities, conclude that 'university prestige is the most important driver for the sorting of Chinese students across British universities' (2018: 365). Measuring university prestige using a set of questions from the Higher Expectations Survey (HES) –in which students are asked, inter alia, about the perceived prestige of an institution–, they conclude that there is 'a significant positive association between university prestige and the total number of Chinese international students in a university', particularly 'with the sorting of master's students' (ibid.: 372). Interestingly, though, they also conclude that the relationship between university prestige and HEIs' non-EU international enrolments is not linear, suggesting that those HEIs with the highest HES scores are not the ones that recruit the most non-EU international students:

> 'the results show that the positive association between university prestige and the total number of Chinese international students does not seem to hold for the highly prestigious universities. This may in part reflect the fact that highly prestigious institutions are extremely selective and provide only limited opportunities for Chinese students despite the strong appeal of their reputation' (ibid.: 373)

Qualitative research supports the findings summarised above. For instance, Cebolla-Boado and colleagues, using focus groups to triangulate their quantitative findings, report that their participants were highly attuned to UK's institutional hierarchies. One of their participants stated that 'universities with higher overall rankings must be more famous in China, I have to think ahead about my employment prospects when I go back to China; (ibid.: 374). Analogously, in a project investigating the motivations of UK students to study outside the UK, Findlay et al. report that most of their participants were 'determined to attend a world-class university' (2012: 124). They go on to argue that recent growth in international student mobility flows have coincided with 'the social construction of an outstanding international university [,which] has resulted in a global hierarchy of institutions and that the majority of international students from the UK are concentrated in a few countries and in elite or specialised institutions' (ibid.: 128).

Thus, the literature synthesised above yields the first two hypotheses informing my empirical analysis:

 $H_1$ : In 2016/17, the shares of students who are non-EU international<sup>10</sup> in UK HEIs are higher in more prestigious institutions<sup>11</sup>.

 $H_2$ : Between 1995/96 and 2016/17, prestigious universities have enjoyed more growth in their shares of students who are non-EU international during periods of expansion and suffered less decline during periods of plateau.

Finally, there is one element that I would like to highlight from what I have found in the literature that may explain the reasons behind reality if the hypotheses above were true: the relationship between international education and the reproduction of privilege. In this sense, Brooks and Waters argue that at the core of international student mobility is 'the desire on the part of many middle-class families to accumulate capital' in Bourdieusian terms (Bourdieu and Passeron 1977; in Brooks and Waters 2013: 13). In this sense, Findlay et al. claim that 'above all [among their participants] international student migration was seen to be about symbolic capital. One of the uses of this symbolic capital was to represent international student as a distinguishing identity marker' (2012: 128). We find similar recurrent themes in research about Chinese students abroad.

<sup>&</sup>lt;sup>10</sup> As explained in Chapter 4 (Data and Methods), my main dependent variable is the percentage of students who are non-EU international in UK HEIs. This is done to factor institutional size –measured as total enrolments– into my analysis, as the counts of non-EU international students in UK HEIs is largely a function of their size, as I show in chapter 5.

<sup>&</sup>lt;sup>11</sup> In Chapter 4 (Data and Methods) I propose an operationalisation of the latter.

Xiang and Shen argue that, in China, when 'high-value cultural capital (reputable western degree)' is attained, 'one can gain symbolic and political capital relatively easy' (2009: 321)

In this sense, Aline Courtois develops this relationship forward and links the internationalisation of higher education with the development of 'a stateless "transnational capitalist class" (2018: 297)

'Arguably, the internationalisation of elite educational spaces and the cross-border mobility of elite students contribute to the formation of global elite identities, networks and practices. [...] The "neoliberal imaginary of globalisation" influences institutional decisions as well as individual strategies, creating desires for the acquisition of cosmopolitan capital as a means to reinforce employability in an assumed global labour market' (ibid.: 298; 301)

Moreover, other studies suggest that experiencing some form of international mobility, including what is known as "credit mobility", that is undertaking part of a degree abroad that is being completed at home, leads to better labour market returns, higher income and 'steeper wage growth in their professional career' (Lörz, Netz, and Quast 2016: 144). Prazeres and colleagues (2017) argue that this is the result of the accumulation of different forms of capital, as 'privilege and advantage can be reproduced, even unintentionally, through a pursuit of adventure and a 'carefree student lifestyle' (ibid.: 115). This, in turn, make mobile students more likely to have 'better language competencies', more flexible 'in becoming mobile for attaining favourable employment conditions and [have] better access to well-paid positions in internationally operating companies' (Lörz et al. 2016: 158). Mobility also represents a further obstacle for students from less privileged backgrounds. Nationally-bounded research states that students from less privileged backgrounds find more barriers when they seek to study away from their family home. Holdsworth (2006) argues that non-traditional students that stay at home for the duration of their degrees find

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it more difficult to 'fit and mix with other students' (ibid.: 516). He goes on to suggest that 'a key characteristic of the English education system [is that it] valorises middle class –rather than working class– cultural capital' (Reay 2001: 224; in Holdsworth 2006: 516), a form of capital that is more likely to be gained through mobility processes. It could be argued that global education favours global middle-class values and as such being mobile during university years may be seen as a fundamental part of a process of gaining both professional and cultural capital.

Similarly, Brooks and Waters (2009) highlight the role of 'overseas education in securing a privileged labour market position and in opening up access to elite social networks' (ibid.: 1087). In this sense, students from 'less privileged families [...] still refrain from studying abroad' (Lörz et al. 2016: 154). The mass expansion of higher education together with the development of labour markets increasingly requiring qualified labour force as a way of identifying high-skilled individuals have brought about the need for students to differentiate themselves in a congested graduate labour market (Brooks and Waters 2013; Brown, Lauder, and Ashton 2011; Shavit, Arum, and Gamoran 2007; Wolf 2002). In this sense, some researchers argue that international student mobility has become a new qualitative frontier (cf. Lucas 2001) of the reproduction of privilege in higher education:

'In view of the educational expansion, the declining social inequality in access to higher education and rising competition for more lucrative jobs, international educational mobility may be understood as a new and more subtle mechanism of social inequality reproduction' (Lörz et al. 2016: 154)

This 'subtle mechanism' may also interact with other forms of distinction within higher education. For instance, in a paper on progression to postgraduate study, Wakeling argues that 'as the bachelor's degree becomes ubiquitous, its relative advantage in the labour market is diminishing' (in Wakeling 2005:506; Wolf 2002) –this could mean that postgraduate study abroad is used as an extra layer of advantage to postgraduate study at home.

This understanding of international education as a mechanism for distinction appears to be universal, even among students from countries were global elite education is available. Allan Findlay and colleagues (2012), in a study that explores the motivations and meanings of international student mobility focusing on mobile UK students, analysed two questionnaire surveys collected from 1,400 English final-year pupils and 560 UK students currently getting a degree abroad together with 80 in-depth interviews to UK students enrolled in institutions abroad, 16 international recruitment officers 'from around the world (sic) [...] as well as with a number of key gatekeepers in the international student mobility system' (ibid., 123). They argue that, in the case of UK students abroad, 1) 'class seeks to reproduce itself through educational advantage with pupils from independent/private schools being more likely to gain access to university education in other countries'; 2) that there is a 'social construction of an outstanding international university [which] has resulted in a global hierarchy of institutions and that the majority of international students from the UK are concentrated in a few countries and in elite or specialised institutions'; and 3) that the phenomenon of mobile students cannot be disentangled from broader life trajectories -'a "world-class" education for some is embedded in a mobility culture that attaches symbolic capital to the very performance of international living' (ibid., 128). They study the UK as an interesting country as 'one might ask why so many UK citizens leave a country renowned for the quality of its universities' (ibid.). They argue this is the case because 'international student mobility constitutes a critical means of intensifying social difference within the globalising higher education system' (Marginson and Van der Wende 2007, in Findlay et al. 2012: 119). Moreover, as Findlay et al. suggest, looking at UK students studying abroad as a case study of global student mobility 'leads to questions about how the internationalisation of higher education is linked to the reproduction of unevenness in the global labour market'.

In a similar tone, Aihwa Ong argues, in her ethnographic work on transnational practices and linkages with a focus on the economic elites in Southeast Asia, that 'for many ethnic Chinese in Hong Kong and Southeast Asia, both well-off and the not-so-rich, strategies of accumulation begin with the acquisition of a Western education, usually in a missionary school that will launch a youngster to a Western boarding school or college' (Ong 1999:95).

# 5. Distinctive places: geographical location and institutional choice

Besides institutional reputation, it is argued that 'some international students' choice of destination may have just as much to do with the distinction [of place] as of the formal education on offer' (Prazeres et al. 2017: 114). Moreover, in a recent article published by Yin and Yeakey (2018), they explored global flows of student mobility and concluded that, if we consider these flows as a network, 'an individual country's economic and political power and geographic location are increasingly significant in determining its position in the network' (ibid., 50). In this regard, using a qualitative approach, Prazeres et al. (Prazeres et al. 2017) have explored 'narratives of distinction' among international students in UK, Austrian and Latvian universities, with a focus on how students frame their decision to move around the geographical location they study at. They claim that 'the appeal of place is one of the main motivations that lure students to particular cities rather than specific institutions' (ibid.: 117). They go on arguing that students lifestyle aspirations -- 'more mundane and extra-curricular interests' as they call it-, are weighted against 'the value and prestige of reputable universities' (ibid.). Interestingly, Prazeres and colleagues emphasise the fact that their participants favour the value of their place of study rather than their institution, which 'reveal[s] students' insecurities over their (less academically prestigious) location of study within a dominant institutional and hierarchical global higher education market' (2017: 119). This is particularly evident when participants acknowledge that the relative lower academic reputation of their institution. The authors argue this is the case because international student mobility is intertwined with distinction, whether geographical or institutional, and sometimes these two go hand in hand. As argued by Brooks and Waters, 'the "distinctive quality" of place [...] might attract international students to less reputable higher education institutions' (Brooks and Waters 2018: 5).

In the UK, London sits by far at the top of the hierarchy of geographical locations. London, one the world's global cities (cf. Sassen 1991), concentrates 'the best [job] opportunities' (Friedman and Laurison 2019: 24). In this sense, Tindal and colleagues, in the context of a research project exploring the motives of Scottish students moving to England, argued that their participants discussed 'the significance of [London], revealing an attraction to affiliating with a global city because of its economic and cultural opportunities' (Tindal et al. 2015: 96). Moreover, qualitative research has shown that international students in England that did not study in London, developed 'powerful imaginative geographies' that had London 'as a representative of the rest of England', 'overshadowing their understanding of their chosen study site' (Beech 2014: 170). Moreover, Collins argues that 'key cities are tied to imaginative geographies of them as desirable places, inducing "aspirations to become mobile" amongst international students' (2014: 243, in Brooks and Waters 2018: 5).

The relevance of London in international student mobility patterns to the UK is further acknowledged by Findlay (2011), which suggests that one of the main features of these patterns is the geographical concentration of non-EU international students in the capital:

'In the United Kingdom, five of the 12 most popular higher education institutions for foreign students were located in London, with over a quarter of all foreign students being enrolled in the capital. This compares with only 13.2 per cent of UK domiciled students studying in London' (ibid.: 177).

Thus, this produced two further hypotheses to guide this research's empirical sections:

 $H_3$ : In 2016/17, the shares of students who are non-EU international in UK HEIs are higher in those HEIs located in London and other major metropolitan areas<sup>12</sup>.

 $H_4$ : Between 1995/96 and 2016/17, HEIs located in London and other major metropolitan areas have enjoyed more growth in their shares of students who are non-EU international during periods of expansion and suffered less decline during periods of plateau.

When looking at which institutional characteristics may act as pull factors for non-EU international students, HEIs' geographical location poses an interesting conceptual challenge. It could be argued that the geographical location of universities does not necessarily 'have implications for hierarchies of power' between institutions (Marginson and Van der Wende 2007: 17). This institutional characteristic resonates with the concept of 'horizontal diversity' in higher education, which, as opposed to 'vertical diversity' –defined as differences concerned with 'high quality or high reputation' (Teichler 2017a: 2)– is related to a dimension of 'substantive variations', such as the location of HEIs (ibid.). However, as put by Marginson and Van der Wende, 'under certain historical circumstances horizontal differences have vertical implications' (2007: 17). In this sense, the location of HEI may contribute to an institution's competitive advantage.

Interestingly, in recent years, UK HEIs have introduced this feature of UK's locational inequalities into their strategies, seeking to compensate what is perceived as a disadvantage in terms of having a peripheral position by setting up satellite campuses in London (QAA 2014). As argued by Brooks and Waters, 'it is no accident that London is the location of the satellite offshoots of UK HEIs –London is intentionally chosen for its appeal to (primarily) international students' (2018: 12). In fact, this is just an example of the strategies HEIs have historically taken to increase their non-EU international intakes, an issue that is explored in the following section.

<sup>&</sup>lt;sup>12</sup> To define "major metropolitan areas", I use what Pike and colleagues have called 'core cities' –i.e. twelve major population and economic centres defined as 'the principal cities of their city regions, hosting high-level services and anchor institutions that attract investment and people' (Pike et al. 2016: 2).

# 6. HEIs' recruiting non-EU international students: institutional strategies

As discussed in chapter 2, the recent history of recruitment of non-EU international students in UK higher education is tightly related to funding arrangements. A progressive reduction of public subsidies to institutions, paired with political willingness to encourage universities to seek moneys outside the public purse, has brought about a milieu in which HEIs see these students as desirable, partly because of the fees they bring with them. This situation is consistent with the development of the "New Public Management" paradigm in public administration (cf. Marginson 2018a), associated with the creation of 'quasi-markets' in public service provision (Ferlie 1996: 6) and the assumption that the public sector would be better managed with 'more market, less regulation, and strong leadership' (Schimank 2005: 362). This policy environment, as mentioned by Rivza and Teichler (2007), has a growing interest, set out in explicit policy efforts, for universities to attract foreign students for income purposes. In countries such as the US, the UK and Australia, universities have been encouraged -or even 'forced'- to become more entrepreneurial and recruit international students that pay higher fees. As suggested by David Willetts, 'the revenues from overseas students are particularly valued by British universities and help to ensure they are insulated from the vagaries of public spending pressures and contribute to protecting their autonomy' (2017: 303). Similarly, Marginson argues that 'non-EU students are a primary source of discretionary revenues [...] UK universities have a strong incentive to expand non-EU international enrolments and have developed a high financial dependence' (2018a: 33).

Thus, it is not surprising to find how stakeholders, such as the Russell Group, lobby to keep the UK attractive to prospective international students. For instance, the Russell Group, in their submission of evidence to an enquiry set up by the Migration Advisory Committee about the impact of non-EU international students in the UK (MAC 2018), argued that 'international students are of 'significant economic benefit' to both the UK economy and UK universities' 'highquality academic programmes and [...] world-class research activity' (Russell Group 2018). However, HEIs do not restrict their activities to recruit more non-EU international students to lobbying, they also engage with marketing activities, produce changes in their provision and develop recruitment drives in order to increase their intake of non-EU international students. One of this strategies, as explained in the previous sections, has been, among a handful of universities, to set up satellite campuses in London, under the assumption that non-EU international students would be 'more attracted to London than to the home campus' (QAA 2014: 1). This produces the first hypothesis regarding the strategies UK universities may pursue to make their provision more attractive to non-EU international students:

*H<sub>5</sub>*: In 2016/17, HEIs with a satellite campus in London have higher shares of students who are non-EU international<sup>13</sup>.

The literature on international student mobility to the UK also provides information on other strategies HEIs may pursue to make their provision more attractive to international students. It is important to highlight, however, that these strategies are thought to be heavily influenced by what Marginson calls 'the segmentation of global competition' (2006: 20). According to Marginson, 'global competition [like national competition] is powered by an elite/mass dualism created by the exclusionary logic of the positional market'. Subordinated to elite institutions, there is a sector – the 'mass higher education' (ibid.)– that is 'revenue driven, expansionary and often commercial' (ibid.). It is, in the latter sector, that we expect to find higher instances of these strategies. In this sense, as identified by Findlay et al. in a research project investigating marketization practices in the delivery of higher education to international students in UK universities, international officers considered 'the practices that [they] need to employ in order to attract international students' (2017: 148), including the differentiation of degree products and targeting particular markets –i.e. countries– where there is demand and funding. In this sense, a strategy that is highlighted by

<sup>&</sup>lt;sup>13</sup> I have not included a hypothesis with this strategy in longitudinal terms –that is, "HEIs with a satellite campus in London have experienced higher growth in their shares of students who are non-EU international in periods of expansion and less decline in periods of plateau". This is due to the fact that this phenomenon is relatively recent, with all HEIs setting up their satellite campuses between 2010 and 2015, as I have found carrying out a web survey of these satellite campuses and their appearances in the media.

international officers that makes their provision attractive is 'to have a very strong PGT offering that is business-based' (Findlay, Mccollum, and Packwood 2017: 148), underscoring how hierarchies of value work in the context of globalised higher education. In the case of the UK, fields of study including engineering, technology, business, are regarded as being among 'the more remunerative fields' (Iannelli, Gamoran, and Paterson 2018: 11). In the case of the US, evidence suggests that, in recent decades, 'large numbers of students attracted to celebrity careers and the lure of big prizewinners at the top industries like finance, law, business, fashion and the media' (Brown et al. 2011). Thus, one strategy universities may pursue to make their provision more attractive to non-EU international students is increasing their offering in high-demand fields of study. This produced another two hypotheses:

 $H_6$ : In 2016/17, those HEIs with larger provision of higher education in high-demand subjects –such as business– had higher shares of students who are non-EU international.

 $H_7$ : Between 1995/96 and 2016/17, HEIs with larger provision of higher education in highdemand subjects –such as business– have enjoyed more growth in their shares of students who are non-EU international during periods of expansion and suffered less decline during periods of plateau.

Moreover, HEIs may also target specific countries. In this sense, Findlay and colleagues define that marketization in the provision of education to international students can be defined 'as a process producing selective supply-side practices in terms of the selection of the locations for student recruitment' (Findlay et al. 2017), particularly through the use of recruitment agents and agencies (cf. Robinson-Pant and Magyar 2014). In this sense, 'agents and agencies from key markets such as China and India [are] considered especially important' (ibid.: 147). Indeed, these authors argue that targeting particular markets from specific countries has caused that 'international recruitment to UK universities is far from global' (ibid.: 149). They claim that:

'The social practices underpinning recruitment are very powerful in producing the observed pattern of international student flows. If the pattern were a function of demand alone, then a much wider range of origin countries would be engaged in international student flows to the UK and elsewhere [...]. Instead, the power of marketization and the practices that flow from it that have been critical in narrowing the range of origin countries from which the main flows international students come' (ibid.).

The research discussed above yields the following hypotheses:

 $H_8$ : In 2016/17, those HEIs recruiting non-EU international students from a narrower range of countries had higher shares of students who are non-EU international.

 $H_9$ : Between 1995/96 and 2016/17, HEIs recruiting non-EU international students from a narrower range of countries have enjoyed more growth in their shares of students who are non-EU international during periods of expansion and suffered less decline during periods of plateau.

# 7. UK higher education, the recruitment of non-EU international students and the field of higher education

In previous sections, I have discussed the relevance that UK institutional hierarchies have in shaping recruitment patterns of non-EU international students. This is explained by the motivations of prospective mobile students, who seek to gain different forms of capital that is believed to be acquired via international study. Moreover, as suggested by several authors, international students may use mobilities to prestigious universities as an strategy to reproduce privilege (cf. Waters and Brooks 2010; Xiang and Shen 2009). This recalls the notion of higher

education as a 'positional good' (Hirsch 1977; in Marginson 2006). A positional good could be loosely defined as those goods that 'are valued by actual and potential possessors, at least in part, because the satisfactions they yield "are possible only for a minority" (Hirsch 1977: 22; in Schneider 2007: 61). In this sense, in higher education, 'some student places offer better social status and lifetime opportunities than others' (Marginson 2006: 3). According to Marginson, this positional dimension of higher education is one of the most important aspects in the decisionmaking processes of prospective students within national higher education systems (ibid.). Thus, it is not surprising that this is even more relevant at the global level, where prospective international students make decisions entailing significant economic, social and emotional investment (Marginson 2013). As suggested by Moodie, 'because education is a positional good international students as well as domestic students choose institutions within their financial and educational reach which have the highest status' (2009: 312) I have also argued, by reviewing the literature, that UK institutions are indeed concerned with their levels of recruitment due to the role non-EU international fees play in funding UK higher education, encouraging them to engage in practices and strategies that may help them to attract students coming from outside the EU. In this sense, the recruitment of non-EU international students in UK higher education operates like a competitive market, in which institutional hierarchies play a critical role. It could be argued that universities sitting at the top of the hierarchy are in a better position to capitalise the resources available in this competitive market without necessarily having to engage in the practices described above. In this regard, the configuration of UK higher education 'recalls Bourdieu's (1996) notion of a "field of power" (Marginson 2006: 2). This section describes the domain in which UK HEIs operate to recruit non-EU international students as a field of power, arguing that it is a useful theoretical tool to understand patterns of recruitment of these students in UK HEIs.

The Bourdieusian notion of field is defined as 'a configuration of positions comprising agents (individuals, groups of actors, institutions) struggling to maximize their position. Conversely, agents are defined by their relational position within the field's distribution of capital (resources conferring power or status) and from which they derive properties irreducible to intrinsic characteristics of the agents themselves' (Maton 2005: 689; cf. Bourdieu and Wacquant 1992). In this sense, UK higher education institutions -agents- compete for capital available in the form of fees of non-EU international students and the symbolic prestige attached to having a highly internationalised student body. There are two features of fields of power that are very powerful in framing recruitment patterns: polarisation and autonomy/heteronomy. Marginson argues that the field of higher education is polarised 'by an opposition between the elite subfield of restricted production, and the subfield of large-scale mass production tending towards commercial production' (Marginson 2008: 305). The position of agents within this polarised structure may help us understand how they seek to recruit non-EU international students, due to the fact that HEIs' position within the field determines their level of autonomy or heteronomy, which 'is shaped by governments, market forces and both together' (ibid.). In this sense, some institutions, particularly those at the top of UK's hierarchy -and belonging to the 'global subfield of restricted production', the so-called 'Global Super-league' (Wooldridge 2018, in Marginson 2008: 305)- that is those universities which concentrate top researchers, financial resources and are highly selective, can expect to pursue their educational agendas without affecting the international demand for their degrees. Moreover, as shown in the introduction, they can afford to charge more for their degrees to non-EU international students. Marginson argues that 'elite universities [are] student-magnet institutions [that] accumulate prestige, cashed out as tuition revenues and further leveraged to raise public and private monies that buy high-cost faculty and sustain research programs' (2006: 6). Conversely, less prestigious universities may have to tune their services to the market in order to encourage non-EU international students to pay for their degrees. In summary, the position of HEIs in the field shape the position-taking strategies they pursue. As suggested by Marginson drawing on Bourdieu (1993), position-taking:

> 'is not an open-ended free-wheeling creativity. Only some position-takings are possible, identified by agents as they respond to changes in the settings

and the moves of others in the competition game. Agents have a number of possible "trajectories", the succession of positions occupied by the same agent over time, and employ semi-instinctual "strategies" to achieve them. Agents respond in terms of their "habitus", their acquired mix of beliefs and capabilities, and in particular their "disposition" that mediates the relationship between position and position—takings' (ibid.: 61-73, Marginson 2008: 307).

The framework put forward by Marginson in order to understand how institutions exist and behave in the field of higher education is particularly useful considering the typology of institutions he proposes based on two axes, mapping 1) HEIs' autonomy/heteronomy and 2) degree of global engagement. Besides the opposite subfileds of the 'Global Super-league' and those institutions 'solely focused on revenues and market share' (ibid.: 305), we can find the following intermediate categories:

> <sup>(1]</sup> Some universities have elite roles in their national field and compete in the global research stakes while building high volumes of full fee-paying international students; [2] some other national leaders lack a strong global presence. [3] Beneath both groups are ostensibly teaching-research universities for whom the research mission is subordinated to crossborder revenues. [4] For-profit institutions vary in the extent to which they sustain a global role. [5] Other institutions are solely nation-bound but nevertheless affected by the global field, for they are subordinated by it' (ibid.: 305).

Some of the descriptions of the types of institution described above are highly accurate in describing the way UK HEIs engage –or not– in the recruitment of non-EU international students. While I do not include UK for-profits in my analysis, I can expect to find the practices in the

recruitment of non-EU international students to vary across UK Global elite institutions ('Cambridge, Oxford and a handful of the Russell Group' (ibid.), nation-bound elite institutions with high levels of recruitment –such as the majority of Russell Group institutions–, 'lesser status non-profit universities [that] are commercial players in [the] global market' (ibid. 306), and teaching-focused nationally-bound universities with marginal engagement in recruitment.

Regarding the strategies I have identified in the literature that are pursued by UK universities to recruit higher levels of non-EU international students, this framework allows to understand how these may vary across institutional types. For instance, I expect to find that UK HEIs belonging to the Global elite –a possible group would be the so-called 'Golden Triangle' universities (Wakeling and Savage 2015)– have highly diverse student bodies in terms of their countries of origin as they do not need to market their "product" to target populations and that they do not need to increase their offering in high-demand subjects –such as business– in order to attract more non-EU international students. In turn, this universities may be more autonomous to UK policy environments, with demand for the education they provide remining high even in the context of tightening student visa rules. Conversely, universities subordinated to the Global super-league but relying heavily on non-EU international student recruitment, may have less diverse international student bodies and higher shares of their non-EU international students concentrated in high-demand subjects. These universities may also be more likely to set up a satellite campus in London to capitalise on the pulling nature of the capital.

# 8. Conclusion

In this chapter, I have discussed the literature dealing with the reasons why students decide to change countries to pursue higher education, with a particular focus on students coming to the UK to study but also paying attention to research elsewhere. First, I have discussed what "pushes" students in their home countries to undertake higher education, commenting on global power relations between countries in a postcolonial milieu. As reviewed in the literature, many researchers argue that most mobility between countries is unidirectional, with mobile students leaving the Global South to enrol in an institution in the Global North (cf. Börjesson 2017; Perkins and Neumayer 2014). While quantitative research confirms this, qualitative research reports that, among the latter mobile students, powerful imaginaries exist around the idea of what a "good" higher education is supposed to deliver, that is generally in English, and in a well-reputed 'Western' university (cf. Beech 2014; Xiang and Shen 2009). The literature also suggests that the motives among mobile students within the Global North is conditioned by more individualistic approaches related to potential experiential outcomes and a sense of "adventure" (Waters and Brooks 2010).

I have also explained what other researchers have to say about the distribution of non-EU international students within the UK, which has allowed me to develop a series of hypotheses that will guide my empirical chapters. Primarily, most research emphasises the importance of institutional reputation in the way prospective mobile students make decisions about their study destinations. Market signals of reputation, such as league tables, appear to have a substantial impact in students' decision-making processes, as confirmed by both quantitative and qualitative accounts. Moreover, reputation appears to be intertwined with other structural characteristics of HEIs. For instance, the location of UK universities, in terms of the settlements they are located in, appear to be a pull factor of upmost importance to prospective non-EU international students. In this sense, a hierarchy of UK geographical locations -with London sitting at the top of this hierarchy- is as important as institutional hierarchies in shaping the flows of non-EU international students to UK higher education. Notwithstanding, I have also reviewed that these characteristics do not fully explain these patterns and the strategies institutions decide to pursue in order to make their provision more attractive to non-EU international students also play a role in 'producing the observed patterns of international student flows' (2017: 149). Although scarce, research on this topic provide interesting theoretical and empirical accounts supporting the idea that international student patterns are not just a function of demand alone. For instance, Brooks and Waters (2018)

discuss how, in recent years, UK universities based outside London have decided to set up satellite campuses in London, UK's major global city, in order to attract more fee-paying international students. Moreover, Findlay and colleagues (2017), investigating the discourses of major figures concerned with internationalisation strategies in UK universities, report that UK HEIs market and adapt their provision to secure intakes of non-EU international students. Here, I have discussed how UK HEIs may increase their offering in high-demand subjects –such as business– and narrow the countries they actively recruit students from. In this sense, one internationalisation officer suggested that '[they] adjust what [they are] doing in terms of marketing to work in the places where there is funding' (ibid.: 148).

Finally, I have discussed the appropriateness of using Bourdieu's concept of "field of power" (1993) developed further by Marginson (2008) in order to understand how competition for non-EU international students work in UK higher education. Here, I have argued that the hierarchical position of UK universities within the field shapes the way they engage in the recruitment of non-EU international students, with universities at the top being autonomous from the market and UK policy dynamics. Conversely, lesser status universities need to undertake position-taking strategies in order to maintain their competitivity within this highly hierarchical field.

# Data and Methods

# 1. Introduction

Chapter 2 discussed the evolution of international student mobility into UK higher education, reviewing historiographical and sociological research, and providing a rich description of UK policy milieus and socioeconomic and political changes elsewhere that may allow us to understand the shape of this evolution. Chapter 3 set out to synthesise what existing research says about the distribution of non-EU international students in UK higher education and what factors and individual motivations may explain this distribution. It also establishes a link between the recruitment of non-EU international students and vertical disparities between UK higher education institutions (HEIs) in terms of reputation and prestige. In this regard, non-EU international students tend to concentrate in HEIs perceived to be more prestigious, bringing in more resources to HEIs that tend to be better resourced in the first place, contributing to reproducing stratification in UK higher education (c.f. Findlay 2011; Lomer, Papatsiba, and Naidoo 2016; Marginson 2006). However, it emerged from the review that there are still gaps that need to be addressed to better understand how non-EU international students are distributed across UK HEIs. Particularly, I have noted the relative paucity of empirical research modelling the factors that may explain this distribution and how it has changed over time considering changing UK policy milieus.

This chapter discusses the data and methods employed in this thesis to address this gap and hence answer the research questions produced in chapter 2. My empirical analysis is divided into two chapters. The first of these, chapter 5 explores the relevance of the predicted drivers identified in chapter 3 in explaining the distribution of shares of students who are non-EU international across UK HEIs in 2016/17, using a cross-sectional approach. The second, chapter 6, does so

longitudinally, looking at how the evolution of these shares have changed in the last two decades considering the predicted drivers. The analysis consists of descriptive analysis, bivariate and multiple regression modelling of a large dataset containing information on the characteristics of students in UK higher education from the academic years 1995/96 to 2016/17 inclusive. First, I put forward the reasoning for selection of these data and discuss the appropriateness of the design for answering the research questions posed in this thesis. Second, I critically discuss the operationalisation of key concepts identified in previous chapters as being paramount in shaping recruitment patterns. Third, I discuss the analytical techniques used in the empirical chapters, namely bivariate measures of association, multiple ordinary least squares (OLS) regression modelling, and multiple OLS regression modelling with linear splines in order to account for the irregular growth patterns in the shares of students who are non-EU international. Finally, I conclude this chapter with a critical note on using multivariate modelling in social science research.

# 2. Secondary data on non-EU international students in UK higher education

In order to address this thesis' research questions, the ideal dataset needs to include censuslike information on all students in UK HEIs, uninterruptedly for a series of years in order to compare recruitment patterns against political and socioeconomic changes. This makes the use of quantitative approaches to data collection and analysis highly appropriate, paired with rich descriptions of the context in which these data exist. Qualitative approaches to data collection and analysis in the context of my research would lead to the creation of knowledge on how non-EU international students process institutional information in order to make decisions where to study and would shed light on the drivers that motivate these students' choices. I have discussed, in previous chapters, how qualitative approaches to research problems subsidiary to my research are extremely informative in identifying these drivers and framing them within students' cognitive processes and the structures that shape their lives. However, these approaches would not allow for the exploration of macro-level trends in recruitment over time.

Thus, an appropriate type of data that can be used to tackle the research questions posed in this thesis is secondary administrative data, which allows researchers to understand the state of a specific sector –such as higher education – and its evolution over time if appropriately collected. Usually these data, 'consists of total counts and averaged values [...] usually defined geographically, which contains numbers of individual cases' (Byrne 1998: 77). The use of secondary data in social research in general, and education in particular, has a longstanding tradition, providing tools for research and policy development alike (Siddiqui 2019). In the case of research on international student mobility, I have identified several sources of secondary data that would allow, at different levels of appropriateness, my research questions to be addressed.

In order to capture international student mobility flows, several researchers have used data collected jointly by the UNESCO Institute for Statistics (UIS), the OECD and Eurostat –referred in the literature as UOE data (Eurostat 2018). These three supra-national agencies have been particularly instrumental in terms of coordinating the collection of aggregate data on education issues, systematising 'national statistics according to a common set of definitions and operational guidelines' (Teichler 2012: 490). For instance, both McMahon (1992) and Naidoo (2007) make use of this UOE dataset to understand the factors that shape international student mobility flows to UK higher education. Börjesson (2017) also utilises these data to depict global international student flows, identifying poles of attraction between particular sending and receiving countries. Indeed, these data are particularly useful to understand international student mobility flows globally, as it presents information aggregated at the country level. However, as argued by Naidoo, these data presents substantial limitations when exploring mobility patterns at the institutional level, as it 'does not reflect any particular institution' (2007: 302). Thus, UOE data would lack enough detail to address the research questions posed in this thesis.

An alternative source of data, which does include institutional-level information, is the one provided by UK's University and Colleges Admissions Services (UCAS), which 'is the administrative body responsible for processing almost all applications for full-time study at higher education level nationally' (Boliver 2013: 348-349). UCAS provides regular data services to researchers that seek to understand patterns of university applications and acceptances at the undergraduate level, including for those coming from outside the European Union. For instance, Soo and Elliott (2010) use UCAS data to understand choice of UK universities by non-EU international students. One of the main strengths of UCAS data is that it allows researchers to assess demand for particular institutions and courses, as it includes information not only on enrolments but also applications. This, regarding my research, would be exceptionally useful in order to understand which universities are particularly selective in their admissions practices especially compared to selectivity patterns among UK-based students- and how these patterns relate to institutional characteristics. However, there are two main limitations of UCAS data. First, UCAS' activity is restricted to undergraduate admissions, leaving aside other levels of study that are even more relevant when recruiting non-EU international students in UK HEIs -such as master's courses-, particularly regarding the development of commercial activities in HEIs that impact their finances (The National Committee of Inquiry into Higher Education 1997). Second, UCAS data do not include information on all non-EU international undergraduate applicants. According to a UK Government report, in 2012, only about 40 percent of non-EU undergraduates processed their applications via UCAS (HM Government 2013). This is due to the fact that many universities in the UK accept direct applications from non-EU international students<sup>14</sup>. Qualitative research confirms this. One undergraduate participant in a study carried out by Maringe and Carter reported that one of the reasons why it was easier to study in the UK relative to other countries

<sup>&</sup>lt;sup>14</sup> I carried out a web survey of the application of pages of UK HEIs for non-EU international students and interesting patterns emerged. There was a clear divide between Russell Group –and other "old" institutions– and the rest of the sector, with HEIs belonging to the former group only accepting non-EU international applications via UCAS.

was that 'in England, you apply directly to the institution of your choice and if you do it on line, the next day you have a response' (2007: 467).

A source of data that presents fewer limitations and provides a more complete picture of non-EU international student recruitment in UK higher education is provided by the Higher Education Statistics Agency (HESA), which has been used in this research. HESA is the main organization in charge of collecting administrative data about UK higher education institutions, and has been recognised internationally for the quality of its data collection (Kelo et al. 2006). Several researchers investigating patterns of international student mobility into the UK have made use of these data, as 'the country of residence from which a student enters a UK HEI is a compulsory field in the HESA student record' (ibid.: 219). Moreover, HESA distinguishes those students that enrol in UK HEIs as part of an exchange programme such as the EU's Erasmus programme, known as 'credit mobile students', from those entering a full programme, known as 'degree mobile' students (ibid.). This allows researchers to identify which students are attracted to UK HEIs for full programmes and, hence, contribute economically via their fees.

For instance, in several pieces, Findlay and colleagues use HESA data to contextualise their theorisations on the nature of mobility and recruitment drives developed by institutions (cf. Findlay 2011; Findlay et al. 2017). Equally, Cebolla-Boado et al. have used HESA data to explore the factors that shape the distribution of Chinese students across UK higher education institutions (2018). Furthermore, Machin and Murphy have utilised HESA data to look at whether increased recruitment of non-EU international students in UK higher education institutions have displaced UK-based students at first degree, postgraduate taught and postgraduate research levels (2017). In the following lines, I describe the HESA data selected for this research, how I have selected the HEIs included in my analysis, and how I have derived key explanatory variables included in this thesis' empirical chapters.

# 3. Exploring patterns of recruitment of non-EU international students in UK higher education using HESA data

This section describes the data provided by HESA, including definitions of the population of interest and the specific variables used –referred as "fields" by HESA– and how derived variables were produced. Moreover, this section also provides further detail of the final sample of HEIs – referred as "providers" by HESA– how these HEIs were merged together or excluded and why.

The dataset used in the empirical component of this thesis was extracted from the HESA student record. Detailed information of this source can be found on HESA's website (HESA 2018c). The data collected by HESA is submitted by higher education providers, which is required for regulatory purposes and, in the case of publicly-funded universities, is collected as a statutory requirement (Wakeling 2009). HEIs are expected to submit data in the reporting period that commences on 1 August and ends on 31 July of each year.

The data for this thesis contains information on full-time equivalent (FTE) student numbers by higher education institution (HEI) and cost centre –used here as a proxy for subject of study– for the academic years 1995/96 to 2016/17<sup>15</sup>. The resulting dataset contained information on all FTE students (N= 36,728,903) in this period in UK publicly-funded HEIs and the privately funded University of Buckingham. Student numbers are reported for those individuals who are undertaking a higher education course, that is for courses above level 3 of the Office of Qualifications and Examinations Regulation (Ofqual). Incoming visiting and exchange students, and those studying wholly overseas –that is outside the United Kingdom– are excluded from the standard population. This is particularly important as my thesis is concerned with students that move to undertake a full program (i.e. degree mobility) rather than to gain HE credits while registered in an institution at home (i.e. credit mobility; the ERASMUS scheme would be an

<sup>&</sup>lt;sup>15</sup> HESA started collecting data in 1994/95. However, following the advice of HESA analysts suggesting that the quality of the 1994 data is poor, I purchased data from 1995/96 onwards.

example of this). Students are recorded by HESA as 'instances', which describes a student's registration leading to the award of a qualification. If a student is registered on more than one programme, they would be recorded more than once in the dataset. FTE measures the proportion of a full-time course that a student is studying.

The way HESA records data has changed over time. Thus, some recoding of the dataset has been required to allow for comparability. For the academic years 1998/99 onwards, HESA data on students –also known as the HESA standard registration population<sup>16</sup> – includes information on students active in the period between 1 August to 31 July, except those who withdraw from a course within two weeks of the start date of their instance or the anniversary of their instance<sup>17</sup>. This was not the case for academic years previous to 1998/99, which recorded those students active in higher education on 1 December. Therefore, in order for the data to be comparable across all years, the dataset includes those students that were active on 1 December for all academic years. Moreover, the original dataset includes information on students' mode of study, level of study, country of domicile, whether they are first year students, sex, ethnicity (only applicable to UK domiciled students), socio-economic classification (idem.), the kind of secondary school or college they attended (idem.), and whether they come from a low participation neighbourhood (idem.). The variable containing information about students' level of study consists of the following four levels: "first degree", "other undergraduate", "postgraduate taught (PGT)", and "postgraduate research (PGR)", which are distinguished from each other throughout my analysis. From the latter levels of study, I have decided to exclude "other undergraduate", as it includes qualifications that are below first degree level (HESA 2018a). PGT students include those studying a master's degree, 'postgraduate bachelor's degrees at level M and postgraduate diplomas or certificates not studied

<sup>&</sup>lt;sup>16</sup> For more information on HESA's standard registration population see the following link: <u>https://www.hesa.ac.uk/support/definitions/students</u>.

<sup>&</sup>lt;sup>17</sup> For more information on other students that are not included in HESA standard registration population see: https://www.hesa.ac.uk/support/definitions/students. Relevant to this thesis, the dataset does not include instances of 'incoming visiting and exchange students' and 'where the whole of the programme of study is outside of the UK', meaning that all students not domiciled in the UK in the dataset have moved to the UK to pursue a whole degree.

primarily through research' (Machin and Murphy 2017: 1107). Finally, PGR 'refers to all students studying towards a doctorate, master's degrees and postgraduate diplomas or certificates studied primarily through research' (ibid.).

In this thesis, HESA cost centres are used as a proxy measure for subject of study, which categorise students based on the resources used to teach them. One of the reasons I have decided to use this measure is that there is 'close alignment between HESA cost centres, the HE Academy disciplines and [...] REF Units of Assessment' (HEDIIP 2013:28). Furthermore, within the period of study considered in this thesis, cost centres have undergone fewer changes, allowing for more consistency throughout the years, than other measures of academic subjects, such as the Joint Academic Coding System (JACS). In the case of cost centres, they were changed once between 1995/96 and 2016/17, in the academic year 2012/13 (HESA 2019a). In the case of JACS, this system was changed three times during the period under study (HESA 2019c). Throughout this thesis, I refer to the categorisation of cost centres prior to 2012/13 as "old" cost centres (N=37), and "new" cost centres (N=46) to those used since 2012/13<sup>18</sup>.

The main dependent variable in this research is the shares, in individual UK HEIs, of students who are non-EU international. As explained in the introduction to this thesis, by "non-EU international" I mean those students whose nationality and normal country of residence before entering UK higher education was outside the European Union and the European Economic Area –including Norway, Switzerland, Lichtenstein and Iceland– which determines their fee status (CUG 2019a). Students from countries outside the latter categories pay higher fees than their UK and EU-based counterparts and have become 'a primary source of discretionary revenues' for UK HEIs (Marginson 2018a: 33). The shares of students who are non-EU international students is calculated by dividing the number of non-EU international students by the total number of students in a given HEI. In order to avoid these shares varying substantially due to small changes

<sup>&</sup>lt;sup>18</sup> A list of "old" and "new" cost centres can be found in Appendix 4.

in counts of students, I have decided to exclude from my analysis those institutions that have less than 100 FTE total students in a given instance. Moreover, I have merged those HEIs that experienced a merger before 2016/17, displaying them as already merged back to the earliest academic year of data available, and excluded those institutions that had 6 years or less of data before 2016/17 in order to allow for comparability across years. This has only affected 8 small institutions, 2 which were further education colleges offering higher education courses. Finally, I have also excluded the HEIs "University of London (institutes and activities)", "Homerton College", and "the Open University". University of London (institutes and activities) has suffered, over the period under study, significant changes in its governance, with its institutes progressively being shown separately. Homerton College also suffered changes in its governance, with parts of it merging with the University of Cambridge and Anglia Ruskin University. More information about these changes can be found in HESA's mergers and changes webpage (HESA 2016). Finally, the Open University has been excluded as distance education goes beyond the scope of this thesis. A full list of HEIs included in the dataset, together with the academic years for which data is available for these HEIs can be found in Appendix 1, and a full list of the final sample of HEIs can be found in Appendix 2.

The resulting number of HEIs included in the analytical sample in each academic year by level of study can be seen in table 4.1.

Academic year	First degree	PGT	PGR
1995/96	137	122	57
1996/97	138	126	52
1997/98	137	125	60
1998/99	138	125	56
1999/00	138	126	52
2000/01	138	128	57
2001/02	140	129	53
2002/03	142	134	54
2003/04	142	136	55
2004/05	142	133	56
2005/06	143	135	57
2006/07	144	137	58
2007/08	145	137	55
2008/09	146	137	57
2009/10	146	139	61
2010/11	146	139	63
2011/12	145	139	63
2012/13	146	139	61
2013/14	147	139	63
2014/15	146	142	64
2015/16	147	142	66
2016/17	147	142	65

**Table 4.1.** Number of HEIs at each level of study and each year in the dataset that had at least FTE 100 students from all domiciles for each level of study

Finally, before I delve into the operationalisation of the predicted drivers identified in chapter 3, I have to specify that the figures provided throughout the empirical chapters, when referring to FTE counts of students, are rounded to the nearest multiple of 5, and when reporting percentages of non-EU international students –which are based on raw FTE counts, not rounded ones– these are supressed if the denominator is smaller than 22.5 FTE counts. This is done as a requirement specified in the agreement signed with HESA for the supply of data for this research in order protect student data from unauthorised exposure (HESA 2018b). Moreover, FTE counts of students and percentages are reported for first-year students only, unless otherwise specified. This is done to better understand the effect that UK policy and global socioeconomic and political milieus may have on recruitment. This strategy removes the potential bias of observing a delayed effect that changes in these milieus may have on recruitment, particularly at first degree and PGR levels, which have a higher concentration of students in years other than the first year of a programme. In the latter levels of study, high levels of recruitment in previous years would impact subsequent figures, smoothing out the effects of the abovementioned changes.

#### 4. Operationalisation of explanatory variables

Drawing on the review presented in chapter 3, I have identified a series of factors that may explain HEIs' shares of students who are non-EU international. These include: 1) institutional prestige; 2) geographic location; and 3) HEIs' strategies to make their provision more appealing to this subset of the student population. Among these strategies, chapter 3 identified that HEIs may: 1) locate a satellite campus in London; 2) increase their offering in high-demand subjects –such as business-related courses; and 3) target recruitment drives towards a narrow range of countries where there is demand and funding for students to enrol in UK HEIs. In this section, I discuss how I have operationalised the latter factors. In my empirical analysis, I take two distinct approaches for the inclusion of these operationalised factors. First, in chapter 5, I explore the factors, seeking to identify the ones that have more explanatory power. Later, in chapter 6, I draw from the exploratory approach included chapter 5, together with the necessary considerations of the restrictions that longitudinal analysis imposes, to select the explanatory variables that I include in my modelling.

#### 4.1. Explanatory variables for cross-sectional analysis in 2016/17

The first predicted driver, institutional prestige, is first operationalised in a set of independent variables using different measurements that capture higher education hierarchies in the UK. As explained in chapter 3, theoretically, this thesis understands the relationship between institutional reputation and non-EU student recruitment as a function of national and global competition dynamics of an industry that produces 'positional goods' (Hirsch 1977; in Marginson 2006: 1). This theoretical account, developed by Simon Marginson (Marginson 2006, 2008), proposes that, in the context of global flows of higher education students, global higher education could be understood as a 'field of power' (Bourdieu 1993; Marginson 2008), 'structured by an opposition between the elite subfield of restricted production, and the subfield of large-scale mass production tending towards commercial production' (Marginson 2008: 305). Regarding the recruitment of non-EU students in UK higher education institutions, this could be translated into the existence of a handful of elite UK HEIs that participate in a 'world-wide positional market' (Marginson 2006: 1) –such as Oxbridge and some Russell Group institutions– and other institutions that take part in a 'commercial mass market' (ibid.), among which we can find 'many British research institutions' (ibid.: 22).

Moreover, it is important to highlight that 'high value global education is provided not in institutions offering "global degrees" but institutions whose business is national positional competition' (ibid.: 20). Hence, in order to explore the relationship between the recruitment of non-EU international students and institutional reputation and stratification, it is important to use measurements that capture features of both national and global hierarchies. This would allow us to understand the effects that nationally-bound hierarchies have on the recruitment of non-EU international students in Anglophone universities, which 'exercise a special power' in a global hierarchy of nations (ibid.: 24).
One possible classification of British universities contains four distinct segments, partially capturing the global reach of a handful of elite institutions and, in turn, collapsing universities into nationally-bounded categories of prestige –I have called this variable *HEI types*. These segments, which, as in the case of Australian universities, have 'been shaped by history and funding' (ibid.: 11), include the following categories and were used by Fenton and colleagues to understand the relationship between globalisation and academic careers (Fenton, Modood, and Smetherham 2011)<sup>19</sup>:

- The Golden Triangle: includes Oxbridge and a handful of London institutions: Imperial College, King's College, University College London and the London School of Economics (LSE) (Wakeling and Savage 2015). As argued by Fenton and colleagues, 'these institutions not only receive a large section of the research budget in the UK, but also enjoy a worldwide reputation for excellence in their own right' (Fenton, Modood, and Smetherham 2011: 114).
- Other Russell Group institutions: the Russell Group, a 'self-proclaimed [group] of "leading" universities' (Boliver 2015: 608), includes the 6 Golden Triangle institutions and 18 other research-intensive universities, which receive a very large share of research funds and are highly socially selective (Boliver 2013).
- Other Pre-1992 HEIs: this group contains all institutions that do not belong to the two categories above but were founded before 1992 (N=42), the year were polytechnics were admitted to 'the higher education club' (Scott 1995: 2). While these universities may not enjoy the same reputation as the ones included in the two categories above, it is believed that institutional age plays a major role in shaping public perceptions of institutional prestige and other indicators of research esteem and social selectivity (Raffe and Croxford 2015; Tight 1996).

<sup>&</sup>lt;sup>19</sup> A classification of the sampled HEIs by *HEI type* can be found in Appendix 2.

Post-1992 universities: this are universities that entered the higher education sector in or after 1992 (N=87), when the 1992 Further and Higher Education act was passed, granting former polytechnics and Scottish central institutions university titles. Moreover, in the following decades, the criteria to grant university titles have been liberalised, allowing new players to enter the system (Willetts 2017)

Moreover, this classification also partially captures what Moodie calls 'four tiers of tertiary education' (2009). He proposes a typology of higher education institutions consisting of: 1) World research universities, characterised by a high position in global rankings, with intensive research profiles and extremely selective; 2) Selecting universities, ranked highly nationally, with a strong research profile, and highly selective; 3) Recruiting universities, positioned in the middle and low tiers of national league tables, active in research and moderately selective; and 4) vocational institutions, which tend to be unranked, with no research profile and marginally selective or not selective (ibid.: 316). While universities belonging to different *HEI types* may have characteristics found across different types, it is appropriate to capture, at the aggregate level, the different profiles that UK HEIs have.

Secondly, another possible classification of institutions that take into account status as a 'function of student selectivity plus research performance' (Marginson 2006: 1) is Boliver's (2015) clusters of UK universities, which classifies UK universities using 'publicly available data on the research activity, teaching quality, economic resources, academic selectivity, and socioeconomic student mix of UK universities' (ibid.: 608). I have called this variable *Boliver 2015*<sup>20</sup>. Her analysis produces the following clusters:

- **Cluster 1:** elite cluster containing Oxbridge (N=2).
- Cluster 2: other Russell Group universities (N=22) together with other 17 old (pre-1992) universities.

<sup>&</sup>lt;sup>20</sup> A classification of the sampled HEIs by *Boliver 2015* can be found in Appendix 2.

- Cluster 3: 13 old (pre-1992) and 54 new (post-1992) universities
- Cluster 4: 19 post-1992 universities

In the case of Boliver's clusters, there are a couple of discrepancies with my dataset that need to be taken into account. First, as Boliver excluded in her analysis those institutions 'which offer postgraduate courses only, or highly specialist institutions' (Boliver 2015: 625), there are N=28 institutions included in my dataset that appear as not clustered. Moreover, Boliver uses mostly 2012 data, meaning that the University of Glamorgan (cluster 3) and the University of Wales, Newport (cluster 4) appear separately, rather than as the University of South Wales, which was created after a merger of the former two institutions in 2013 (South Wales Argus 2013).

Thirdly, this analysis also includes data retrieved from university league tables<sup>21</sup>, capturing both the global and national standing of UK universities. In this analysis, only data on league tables that is publicly available and accessible at no cost has been included -thus, The Times and The Sunday Times Good University rankings have been excluded. Moreover, for all league tables, I have included data that was published immediately before the academic year 2016/17, with reasonable time for international students to use them to make decisions about the universities they want to study. Previous research suggests that it is overwhelmingly the case that international students do consult university league tables (Cebolla-Boado et al. 2018; Soo and Elliott 2010). In the following lines, I describe all the league tables I have used and how I have transformed their data into variables<sup>22</sup>.

The Complete University guide 2017: this league table has been produced annually since 2007 and uses data on entry standards, student satisfaction, research quality – using data from the Research Excellence Framework 2014– and graduate prospects.

<sup>&</sup>lt;sup>21</sup> I acknowledge that league table data is not, sensu stricto, a continuous variable but an ordinal variable. Alternatively, I could have used the scores given to each HEI produced to calculate ranking positions. Notwithstanding, I have decided to use ranking position as I work on the assumption that the latter is more meaningful for students when making decisions about where to study. Moreover, other research investigating the effect of league tables on enrolments also conceive ranking positions as a quantitative variable (cf. Broecke 2015)

<sup>&</sup>lt;sup>22</sup> League table data for the sampled HEIs can be found in Appendix 2.

This iteration of the annual guide was published on 25 April 2016 (Bothwell 2016). In this case, 127 universities were ranked, leaving 27 HEIs outside the analysis. I have called this variable *CUG 2017*.

- The Guardian University Guide 2017: produced annually since 2004, this is a league tables of UK universities providing undergraduate education which uses eight indicators that do not include research performance measures (Bengtsson 2016). This version of the annual guide was published on 23 May 2016 (ibid.). In my dataset, 119 HEIs had ranking positions in The Guardian league table, leaving 34 universities outside the analysis. I have called this variable *The Guardian 2017*.
- THE World University Rankings 2015-2016: first published in 2004, this ranking contains a record of 800 institutions worldwide, using a series of indicators on teaching quality, research performance, industry income and international outlook which includes a score on 'international-to-domestic student ratio' with a weight of 2.5% (for more information on the rankings methodology, see *Times Higher Education* 2015a). The 2015-16 version of the ranking was published in 6 October 2015 (Bothwell 2015). As the THE World University Rankings include worldwide institutions, only 37 UK institutions were ranked. Therefore, I have grouped the institutions in my dataset in three categories, those ranked in the Top 100 (N=11), those ranked but below the Top 100 (N=34) and HEIs that were not ranked (N=108). I have called this variable *THE 2015*.
- ARWU Rankings 2015: also known as the Shanghai ranking, this was the first ever ranking to assess worldwide institutions in 2003 (Hazelkorn 2014). I use the version of the ranking published in 15 August 2015 (ARWU 2015b). It includes data on the numbers of alumni of an institution winning Nobel Prizes and Fields Medals, faculty, research output and per capita academic performance of an institution (for more information on the methodology of ARWU 2015 see ARWU 2015a). Needless to say,

these indicators are highly contested (Moed 2017). However, in this research, I am interested on the impact these measurements may have on recruitment, rather than whether the measurements may or may not accurately capture research performance. As with THE World Rankings, not all UK institutions are ranked. This, I have grouped the institutions in my dataset in three categories, those ranked in the Top 100 (N=9), those ranked but below the Top 100 (N=28) and HEIs that were not ranked (N=116). I have called this variable ARWU 2015.

The second predicted driver, geographical location of HEIs, can also be measured in multiple ways. Here, I have used several indicators to capture differences across UK regions and across different types of settlements were HEIs are based on. Moreover, all indicators used here measure London separately, to assess whether what seems to be an axiom –i.e. that London institutions are more attractive to non-EU international students– is true. For all the variables described above, I have used HEIs' postcode of their corresponding addresses<sup>23</sup>.

First, I have grouped all HEIs by their NUTS1 statistical regions, which consists of a 'coherent system for dividing up the EU's territory in order to produce regional statistics' (Eurostat 2019). These include the following categories: East Midlands (N of HEIs=9), East of England (10), London (36), North East (5), North West (14), Northern Ireland (2), Scotland (18), South East (17), South West (12), Wales (8), West Midlands (12), and Yorkshire and the Humber (10). I have called this variable *NUTS1*<sup>24</sup>.

Moreover, in order to explore whether the type of settlement a HEI is at has an effect on non-EU student recruitment, I have also classified HEIs based on the type of settlement they are located in. I have followed the City and Town Classification of Constituencies and Local Authorities produced by the House of Commons (Baker 2018). This classification categorises

<sup>&</sup>lt;sup>23</sup> For a full list of each HEI postcode, see Appendix 3.

<sup>&</sup>lt;sup>24</sup> For a classification of the sampled HEIs by *NUTS1*, see Appendix 3.

Output Areas into the following categories: Core City (London) (N of HEIs=36), Core City (outside London) (37), Other City (27), Large Town (29), Medium Town (10), Small Town (8), and Village or Small Community (6). This classification is based on population, with the exception of Core Cities, which follow Pike et al.'s definition: twelve major population and economic centres defined as 'the principal cities of their city regions, hosting high-level services and anchor institutions that attract investment and people' (Pike et al. 2016: 2). I have called this variable *HoC classification*<sup>25</sup>. The definitions for the latter six categories are as follows:

- 12 Core Cities: twelve major population and economic centres. Also defined as 'the principal cities of their city regions, hosting high-level services and anchor institutions that attract investment and people' (Pike et al. 2016: 2). These include London, Birmingham, Bristol, Cardiff, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, Sheffield, Newcastle-upon-Tyne, and Nottingham. This category is divided into two: Core City (London) and Core City (outside London). This is done due to the particular nature of London, which its population is greater than all other core cities combined, and that the capital performs differently than other core cities in a range of indicators, such as housing and education (Baker 2018: 12).
- Other Cities: other settlements with a population of more than 175,000.
- Large Towns: settlements with a population between 60,000 and 174,999.
- **Medium Towns:** settlements with a population between 25,000 and 59,999.

<sup>&</sup>lt;sup>25</sup> For a classification of the sampled HEIs by *HoC classification*, see Appendix 3.

- Small Towns: settlements with a population between 7,500 and 24,999.
- Villages and small communities: settlements with a population of less than 7,500.

Finally, to identify whether proximity to London also plays a role in shaping the attractiveness of institutions to recruit non-EU international students, I have measured the time required to travel from HEIs' central address to Kings Cross using public transportation. To do so, I have used a combination of Google's application programming interfaces (Google 2018) and Chris Bell's website application that produces distances and times between two postcodes in different means of transportation, including public transportation (Bell 2018). I have called this variable *Distance to*  $KX^{26}$ .

In relation to the strategies universities may follow to recruit more non-EU international students, I have produced one categorical and three continuous variables that seek to capture the predicted drivers explained above. First, using Brooks and Waters' work on London-based satellite campuses (2018) together with a web survey, I have identified those universities that in 2016/17 had an operational campus set up in London (N of HEIs=13). These were Anglia Ruskin University, Coventry University, Glasgow Caledonian University, Loughborough University, Newcastle University, The University of Liverpool, the University of Sunderland, the University of the West of Scotland, the University of Warwick, the University of Cumbria, the University of Northumbria, the University of Ulster and the University of Wales Trinity Saint David. I have called this variable *Campus in London*.

Second, in order to measure HEIs' offering in high-demand subjects for non-EU international students, I have calculated the percentage of non-EU international students that pursue a degree in Law, Economics or Management (LEM) subjects, following Purcell and

<sup>&</sup>lt;sup>26</sup> Distance to KX by the sampled HEIs can be found in Appendix 3.

colleagues classification (2009), which 'derives from empirically observed differences of graduates' aspirations and outcomes across the following four areas: STEM; Law, Economics and Management (LEM), non-STEM academically focused degrees; and vocationally focused degrees. Purcell et al.'s definition of LEM subjects resembles what Brown, Lauder and Ashton have called the big 'prizewinner' careers in industries like finance, law, and business (Brown et al. 2011). To do so, I have categorised the "new" cost centres (N=46) in this fashion<sup>27</sup>. The cost centres included in the LEM category are: economics and econometrics, law, business and management, and catering and hospitality management. I have called this variable *Non-EU LEM*.

Finally, I have created a measure that seeks to capture the diversity of HEIs' non-EU student body in terms of their countries of origin. I have calculated the Simpson's diversity index D (1949) for all HEIs, a measurement of diversity in a given population widely used in research on ethnic diversity in education research (van Geel and Vedder 2011; Juvonen, Kogachi, and Graham 2018). The formula for Simpson's D can be found below:

$$D_S = 1 - \sum_{i=1}^g P_i^2$$

In the formula above, 'p is the proportion of students in the [HEI] who are [from country] *i*. This proportion is squared ( $P_i^2$ ), summed across *g* groups, and then subtracted from 1. *D* gives the probability that any two students randomly selected from a [HEI] will be from different [countries]' (Juvonen, Kogachi, and Graham 2018: 1271-1272). I transform this probability into a percentage, expressed as a number between 0 (perfect homogeneity) and 100 (perfect diversity). This measure is highly erratic when a HEI has very small numbers, thus I have excluded from the bivariate analysis those institutions that have less than 10 non-EU international students. This, together with those universities excluded for having less than N=100 first-year students from all

<sup>&</sup>lt;sup>27</sup> The categorisation of "new" cost centres into Purcell et al.'s (2009) categories can be found in Appendix 4.

domiciles at different levels, produces a sample of HEIs N=137 at first degree level, N=131 at PGT level, and N=64 at PGR level. When I fit an OLS regression model in chapter 5 to my dataset, universities with less than 10 non-EU first-year students and more than 100 first-year students from all domiciles have been given Simpson's D sample mean values. I have called this variable *Simpson's D*.

A summary of the variables discussed above can be found in table 4.2.

Variable name	Summary
Institutional prestige	
HEI types	Classification of HEIs by whether they are Golden Triangle, other Russell Group, other pre-1992, and post-1992.
Boliver 2015	Classification of HEIs using Boliver (20150 clusters.
CUG 2017	HEIs' league table position in the Complete University Guide 2017 league table.
The Guardian 2017	HEIs' league table position in The Guardian 2017 league table.
THE 2015	Classification of HEIs by whether they were ranked among the top 100 HEIs in the Times Higher Education 2015 World Ranking, ranked below the top 100 or not ranked.
ARWU 2015	Classification of HEIs by whether they were ranked among the top 100 HEIs in the ARWU 2015 World Ranking, ranked below the top 100 or not ranked.
Geographical location	
NUTS1	NUTS1 regions where HEIs are located.
HoC classification	Classification of settlements where HEIs are located by population size.
Distance to KX	Distance, in minutes, to King's Cross train station from HEIs' corresponding postcodes in public transportation.
Strategies	
Campus in London	HEIs with a satellite campus in London.
Non-EU LEM	Percentage of non-EU students studying a degree belonging to Law, Economics or Management (LEM).
Simpson's D	Simpson's diversity index $(D)$ measuring the probability that two randomly selected students from a HEI are from two different countries.

Table 4.2. Summar	y of the	variables	used in	chapter 5.
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# 4.2. Explanatory variables for longitudinal analysis 1995/96-2016/17

In chapter 6, drawing from the findings put forward in chapter 5 in terms of the explanatory power of the variables explained above and their appropriateness for longitudinal analysis, I use the explanatory variables *HEI type*<sup>28</sup>, *HoC Classification, Non-EU LEM* and *Simpson's D*, but with some qualifications. Also, as explained in chapter 3, I have excluded the variable *Campus in London* from the longitudinal analysis as this phenomenon is relatively recent, with HEIs setting up these campuses in different academic years between 2010 and 2015.

Regarding distinct measurements of prestige, I have decided to use exclude others for several reasons. First, in the case of Boliver's (2015) clusters, her classification is data-driven, meaning that it could be subject to changes when applying her analysis to earlier data. Although 'national institutional hierarchies tend to be fairly stable with little room for upward mobility especially at the top' (Marginson and Van der Wende 2007: 16), it could be the case that certain HEIs may move between the two lower clusters produced by her analysis. Moreover, as explained in chapter previous sections, a substantial amount of HEIs included in my sample would be excluded as her analysis did not include specialist and postgraduate-only HEIs. Second, the league tables used in chapter 5 only have data available for a reduced number of years, as some league tables were only created in the early and mid-2000s. The Complete University guide was launched in 2007 (CUG 2019b), the Times Higher Education ranking and the Guardian league table in 2004 (Broecke 2015), and the ARWU ranking -the first ever World university league table- in 2003 (Hazelkorn 2007). Thus, HEI types is the most appropriate measure capturing UK institutional hierarchies as is a stable classification throughout the period under study and, as stated previously in this chapter, captures rather well the qualitative differences between institutions in terms of their positionality in both national and global hierarchies.

<sup>&</sup>lt;sup>28</sup> For the longitudinal analysis, HEIs have been recorded as 'Russell Group' if they belonged to the mission group in 2012, the last year in which it was expanded (Durham, Exeter, Queen Mary University of London and York joined the Russell Group in 2012). There have been other rounds of expansion of the Russell Group since it was founded in 1994: in 1998, King's College and Cardiff joined the mission group; Queen's Belfast in 2006.

Second, in order to capture the geographical location of HEIs longitudinally in chapter 6, I use the variable *HoC Classification*. However, in chapter 6 I apply a simplified version of this variable including the following categories: 1) Core City (London); 2) Core City (outside London); and 3) located elsewhere. This simplification is applied for two reasons. First, as we will see in chapter 5, the explanatory power of this variable resides in the fact that distinguishes London from other major metropolitan areas and the rest. Second, this simplification allows for less cumbersome interpretation both in the descriptive analysis and modelling.

Third, regarding the percentage of non-EU students undertaking a course in LEM subjects, I have had to apply further changes in chapter 6 to accommodate for the categories found among the "old" cost centres. Before 2012/13, the coding of cost centres does not allow the application of Purcell at al.'s (2009) classification. This is due to the fact that in cost centres prior to 2012/13 there is no distinction of "law" and "economics and econometrics" as a single cost centre. Instead, these are included within the broad cost centre "social studies", which contains both law and economics-related subjects and academically-focused social science disciplines such as "politics" or "sociology". In this sense, the only standalone cost centre related to Purcell et al.'s (2009) in the "old" cost centres and that also appears in the "new" cost centres is "business and management". Thus, in chapter 6, the predicted driver representing HEIs' offering in high-demand subjects is operationalised using the percentage of non-EU international students in the cost centre "business and management" for each year included in my analysis.

Finally, as in chapter 5, I use Simpson's diversity index D (1949), which gives the probability –expressed in percentages– that any two students randomly selected from a HEI will be from different countries. Simpson's D is calculated for all the years included in my analysis. As I do in chapter 5, HEIs with counts of non-EU international students smaller than 10 are excluded from the bivariate analysis and given sample mean values when fitting the models.

#### 5. Analytical methods

This thesis' empirical chapters utilise four different analytical methods to analyse the HESA data described in the previous sections. As explained in chapter 2, my empirical analysis is reported in two main chapters. Chapter 5, the first empirical chapter, focuses on a cross-sectional analysis of the distribution of non-EU international students across UK higher education institutions, drawing on data for 2016/17, the most recent year in my dataset. In this chapter, I set out to answer two primary research questions:

- 1) To what extent are non-EU international students unevenly distributed across UK HEIs?
- 2) What explains this uneven distribution?

In chapter 6, I explore the drivers of change over time in the distribution of non-EU international students across UK HEIs, drawing on a longitudinal analysis of data for the period from 1995/96 and 2016/17. In this chapter I analyse how patterns of recruitment across HEIs have changed against the phases described above, focusing on the effects that milieus of expansion and stagnation have had on the distribution of non-EU international students across HEIs. To do so, I set out to answer the following research questions:

- 3) To what extent was the growth experienced in the periods between 1999 and 2003, and 2007 and 2010 of non-EU-international students unevenly distributed across UK HEIs?
- 4) To what extent was the stagnation experienced in the periods between 2003 and 2007, and since 2010 of non-EU international students unevenly distributed across UK HEIs?
- 5) What explains this uneven distribution?

First, in both chapters I put forward descriptive analysis of the data, exploring basic patterns regarding how the counts and shares of students who are non-EU international are distributed across HEIs, countries of origin and subjects of study. In chapter 6, I do the latter longitudinally, exploring how these distributions have changed in the timespan under consideration.

Second, I set out to consider how the distribution of shares of students who are non-EU international vary across HEIs by exploring bivariate associations between the main dependent variable and the operationalised drivers explained above. To do so, I use conventional techniques that capture the variation of the dependent variable when the explanatory variable changes based on the nature of the variables at stake. In this sense, the explanatory variables included in this thesis' analysis take two forms: categorical and continuous. I measure the association between categorical variables and the proportions of students in an institution who are non-EU international using  $\eta$  (eta) and  $\eta^2$ (eta-squared), two measures of association between categorical and continuous variables that are common in educational research (Trigo-Sánchez and Martínez-Cervantes 2016).  $\eta$  (eta) 'measures the degree of association between the two variables' and 'the square of the correlation ration  $\eta^2$  (eta-squared) [...] measures the proportion of the variation in Y that is associated with membership of the different groups defined by X' (Richardson 2011: 136). When assessing the strength of the relationship between two continuous variables, I use Pearson's correlation coefficient -known as r- which is the standardization of the covariance of two continuous variables. This produces a figure that has to lie between -1 and +1, the former meaning perfect negative correlation and the latter perfect positive correlation (Field 2009: 170). In chapter 6, I explore the associations between the dependent variable and the explanatory variables using the latter measures of association for each academic year in my dataset, in order to assess how the strength of these associations have varied over time.

Finally, in chapters 5 and 6, I use a series of multiple ordinary least squares (OLS) models in order to model HEIs' percentages of students who are non-EU international taking into account a selection of the predictors explained in previous sections of this chapter. In the case of chapter 6, I use an explanatory variable to account for academic year with linear splines, in order to model the different growth rates observed in the evolution of non-EU international student numbers. Multiple OLS regression modelling takes 'into account the correlations between independent variables, and assessing the [net] effect of each independent variable, when the [effects of the] other variables have been removed' (Miles and Shevlin 2001: 31). It is a powerful analytic tool as:

'it yields measures of the magnitude of the "whole" relationship of a factor to a dependent variable, as well as of its partial (unique, net) relationship, that is, its relationship over and above that of research factors' (Cohen and Cohen 2009: 4)

Multiple regression analysis is widely used in educational research (Cohen, Manion, and Morrison 2000), particularly in research exploring the factors that shape the patterns of non-EU international student recruitment. For instance, McMahon uses two multiple OLS regression models to predict the outflow of students from the 'third world [sic]' and the concentration of international students in high-demand countries using a series of explanatory variables describing both source and destination countries' (1992: 468). Similarly, Cebolla-Boado (2018) and colleagues fit two multiple OLS regression models to predict the number of Chinese international students in UK HEIs, distinguishing between undergraduate and master's students and containing several explanatory variables describing UK HEIs. Finally, Naidoo explores the source country determinants –such as 'domestic education opportunities' or 'the level of involvement of the source country in the global economy'– of international student mobility to the UK by fitting an OLS regression model. The equation for a multiple OLS model includes an intercept and a coefficient for each explanatory predictor included and a residual term (Agresti and Finlay 2009: 383):

$$E(Y) = (\alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k) + \varepsilon_i$$

In the equation above, Y is the dependent variable for the *i*th observation –in this case the shares of students who are non-EU international in UK HEIs–,  $\alpha$  is the intercept,  $\beta_1$  is the coefficient of the first explanatory variable X<sub>1</sub>,  $\beta_2$  is the coefficient of the second explanatory

variable X<sub>2</sub>,  $\beta_k$  is the coefficient of the *k*th explanatory variable X<sub>k</sub>, and  $\varepsilon_i$  'is the difference between the predicted and the observed value of y for the *i*th' observation, sometimes referred to as the error term (Field 2009: 210).

In the case of chapter 5, I adapt the equation above to include all the explanatory variables that, after carrying out the bivariate analysis, are identified to have the most explanatory power for each predicted driver. These are a combination of continuous variables and categorical variables transformed in dummy variables, as shown in the equation below.

$$E(Y) = (\alpha + b_1 CUG2017_i + b_2 D_{Core\ City\ (outside\ London)} + b_3 D_{Other\ City} + b_4 D_{Large\ Town}$$
$$+ b_5 D_{Medium\ Town} + b_6 D_{Small\ Town} + b_7 D_{Village}$$
$$+ b_8 \% NonEULEM_i + b_9 SimpsonD_i + \varepsilon_i)$$

In the equation above, the variable *HoC Classification*, used as an explanatory variable to capture the geographical location of HEIs, has the category 'Core City (London)' as a reference category. The model above is fit separately for first degree, postgraduate taught and postgraduate research levels of study.

Chapter 6 also fits multiple OLS regression models –again, separately for first degree, PGT and PGR levels of study– but includes linear splines to estimate five separate slopes for the different policy periods identified in chapter 2– a plateau period between 1995/96 and 1999/2000; 2) an expansionary period coinciding with the first Prime Minister's Initiative between 1999/2000 and 2003/04, 3) a plateau period between 2003/04 and 2007/08, 4) a second expansionary period coinciding with the second Prime Minister's Initiative between 2007/08 and 2010/11; and 5) a final stagnation period after the election of the Conservative-led coalition government between 2010/11 and 2016/17. In a similar approach, but in this case using logistic regression fit to predict enrolment in UK higher education, Boliver (Boliver 2011) uses linear splines to estimate three different slopes coinciding with separate period of expansion in UK higher education between

1960 and 1995. These splines allow to estimate the relationship between the dependent variable and the explanatory variables as a piecewise linear function, creating different slopes coinciding with different periods of growth and stagnation (StataCorp 2017). This is done by connecting linear segments, dividing the range of the data into 5 subintervals for the five slopes with a 'fitted function [that] is linear over each of the subintervals' (Schwarz 2018: 8). Thus, 'the slope of the line is allowed to change between intervals' (ibid.). To divide the range of the data into these 5 subintervals, I produce 4 'dividing points' –known in spline terminology as 'knots' (ibid.). Mathematically, this is expressed as follows:

$$\mathcal{Y} = \beta_0 + \beta_1 \mathcal{X} + \sum_{k=1}^4 b_k (\mathcal{X} - \xi_k)$$

where  $\xi_1 = 1999/2000$ ,  $\xi_2 = 2003/04$ ,  $\xi_3 = 2007/08$ , and  $\xi_4 = 2010/11$  are the knots (ibid.). The equation above is expanded using the explanatory variables explained in section 4.2. Moreover, in order to assess the effect of each explanatory variable in the growth of the shares of students who are non-EU international, I fit four different models interacting each of the explanatory variables with the linear splines.

## 6. A critical note on the use of multivariate modelling in social science research

In this chapter I have spelled out the data and analytical techniques I use in order to address this thesis' research questions. Chiefly, my research questions ask whether we observe significant variation in the shares of students who are non-EU international across UK individual HEIs, and whether changes over time in these coincide with changing UK policy environments. In this sense, I have discussed that the use of secondary data and multiple regression modelling is deemed as highly appropriate. However, this is not without limitations. Several authors have suggested that, epistemologically, social settings –such as the situation of non-EU internationals student recruitment in the UK– require 'complex, holistic, synthetic accounts' in order to produce meaningful theories on how things are (Marginson 2019: 292; see also Byrne and Callaghan 2014 for a discussion on incorporating complexity in social research). In this sense, it is suggested that mathematical modelling, particularly regression-based methods, may be ill-suited to provide these complex accounts. One of the main reasons why this might be the case is that statistical modelling 'impose arbitrary definitions on indeterminate social variables' (Marginson 2019a: 292), an issue that reminds us of the imperfect nature of measurement in quantitative social sciences (Byrne 2002). Indeed, this chapter has provided a further piece of evidence of the complex thought process involved in operationalising variables and in measuring social attributes identified, theoretically, as being relevant in explaining a particular subset of the social world.

The imperfect measurements involved in quantitative social sciences, probably unavoidable, are not the only problem found in research utilising multivariate modelling. Byrne and Uprichard (2012) suggest that classical quantitative social science seek to identify causal explanations by isolating variables from the cases under study and exploring associations between them, which they deem to be inappropriate in terms of grasping the complexity found in the social world. Instead, they suggest that researchers should pursue 'useful and sociologically meaningful' descriptions of cases (ibid.: 111). Equally, Marginson, in a paper discussing the limitations of human capital theory, suggests that 'in many (if not most) human capital studies, the statistical correlation or coincidence between two variables is held to constitute not a suggestive association between them, but a demonstration (or a strong suggestion) that they are causally related' (2019a: 293). This, indeed, is a classic problem in the philosophy of social science. For instance, Robert Merton pointed out that researchers frequently face 'the problem of causal imputation, the problem of ascertaining the extent to which "consequences" may justifiably be attributed to certain actions' (Merton 1936: 897).

Notwithstanding, these authors also regard statistical modelling as useful 'auxiliary tools in studying relations and comparisons' (Marginson 2019a: 292). However, as social researchers, we

have the duty to acknowledge its limitations and carefully explain the implications of finding significant associations between variables. These associations, as stated by Sayer, 'are not explanations in terms of mechanisms at all, merely quantitative descriptions of formal (not substantial) associations' (Sayer 2000: 22; in Marginson 2019: 292). Substantivity comes from the way we incorporate these associations in our theoretical reflections, not from themselves. This is indeed how I use the formal associations found in my empirical study. I understand my results as quantitative descriptions of the social world that may contribute to a substantive narrative aiming at explaining how this world operates.

The field of Non-EU international Students in UK higher education in 2016/17

# 1. Introduction

This chapter, the first empirical piece in my thesis, looks at the current state of non-EU international student recruitment in UK higher education, carrying out a cross-sectional analysis of the patterns of recruitment across higher education institutions (HEIs) in 2016/17, the most recent year in my dataset. I set out to answer two primary research questions:

- 1) To what extent are non-EU-international students unevenly distributed across UK HEIs?
- 2) What explains this uneven distribution?

As suggested in the literature, there are now more non-UK individuals enrolled in UK higher education institutions than ever before (Brooks and Waters 2013; Perraton 2014). However, as shown in chapter 2, the numbers of non-EU international students in UK higher education sit amidst a period of plateauing or even decline, starting in 2010/11 after the election of the Conservative-led coalition government, which pushed for the tightening of visa regulations for non-EU international students. This has happened after a period of overall growth, with the exception of the period 2003/04 to 2007/08, in which growth slowed down or even reversed. It is also important to highlight that, across all levels of study and both for absolute numbers and proportions, growth appears to take off in the academic year 1999/00, coinciding with the launch of the first Prime Minister Initiative, which aimed to boost non-EU international students were distributed in UK higher education across institutions and subjects of study in 2016/17, the most recent year in my dataset, understood as the closest representation of the current reality of recruitment of non-EU international students in the sector. I will also look at the countries these students come from and the subjects they study.

Section two provides a basic description of the distribution of non-EU international students, both in FTE counts of students and percentages, across HEIs, the subjects they study and the countries they come from by the end of the period under consideration, again distinguishing between first-degree, postgraduate taught (PGT) and postgraduate research (PGR) levels of study. I show that the absolute number of non-EU-international students varies widely across HEIs, as does the proportion of all students who are non-EU-international. In turn, I explore whether total FTE enrolments in HEIs may explain this distribution. Bivariate analyses show that whereas FTE counts of non-EU international students is largely a function of overall institution size, percentages of non-EU international students are not strongly related to total enrolments and instead, as it factors in size, represents the degree to which the institution concerned has been successful in attracting non-EU-international students. This variation across HEIs in the proportion of students who are non-EU-international constitutes the explanandum of this thesis.

Section three makes use of bivariate statistics to examine five predicted drivers –as identified in chapter 3– of the institutional variation in the proportion of students who are non-EUinternational, considering first-degree, PGT and PGR separately as before. First, I test the hypothesis that the proportion of students enrolled at an institution who are non-EU-international tends to be higher at more prestigious institutions, as indexed by national and international league table rankings, mission group categories and classifications that factor in dimensions of vertical stratification (cf. Teichler 2017a). Second, I test the hypothesis that the percentage of students who are non-EU-international tends to be higher for institutions located in major metropolitan areas, and in London in particular. Third, I look at whether those universities that set up satellite campuses in London have higher shares of non-EU international students. Fourth, I test the hypothesis that the share of students who are non-EU-international tends to be higher in institutions where such students are highly concentrated by discipline, most notably in courses related to business and allied subjects. Finally, I test the hypothesis that the percentage of students who are non-EU international tends to be higher in institutions where such students are drawn from a narrower range of countries of origin, most notably China which is the largest source of non-EU-international students for the UK.

Section four explores whether the strategies dealt with in section 3 vary across institutional types in terms of their hierarchical positions within the field of higher education. As explained in chapter 3, UK higher education institutions compete for non-EU international students, both because of the fee revenues they bring with them and the reputation attached to having a highly internationalised student body (cf. Findlay et al. 2017). However, the intrinsic characteristics of these institutions do not make this competition a level playing field, with the 'positions' that UK universities have within this field shaping their 'position-taking strategies' (Marginson 2008). Here, it is argued that universities holding global and national elite positions may be more autonomous to market dynamics and hence not having the need to pitch their offering to non-EU international student markets.

Section five builds on the descriptive analysis and the bivariate associations presented in section three and four by developing a multivariate explanatory model, taking the percentage of students who are non-EU-international as the dependent variable in an ordinary least squares (OLS) regression model. All four predictor variables are entered into the model to test the hypothesis that each has a multivariate independent effect on the dependent variable. I anticipate that institutional prestige will be the strongest of the four predictors, followed by location in the capital or another major metropolis.

Finally, section six summarises the key findings of this chapter, relating these back to the theoretical framework elaborated earlier in the thesis in chapter 3.

# 2. Non-EU international students in UK higher education in 2016/17: institutions, fields of study and countries of origin

In section two, I have identified that the recruitment of non-EU international students in UK higher education has been characterised, in the last two decades, by intermittent periods of

expansion, plateauing and, in some cases, decline. In fact, recruitment patterns in 2016/17 belong to a phase which is featured by a relatively long period of stagnation and decline that started roughly around the election of the Coalition government in 2010. As highlighted in chapter 3, previous research suggests that particular institutional characteristics -such as judgements of the academic quality of institutions or geographical location- play a significant role in shaping these patterns, creating uneven landscapes of international students recruitment in the UK and elsewhere (Alberts 2007; Findlay 2011; Waters and Brooks 2011). This section aims at providing a basic overview of this unevenness across UK higher education institutions in the academic year 2016/17 before exploring the drivers that may explain this variation, while the chapter that follows will focus on explaining change over time. Again, the analysis will distinguish between levels of study -first-degree, postgraduate taught, and postgraduate research. It will also explore the relationship between counts of non-EU international students and overall institutional size, in terms of total enrolments from all domiciles. It concludes that this relationship indeed exists and, in order to investigate institutional characteristics and recruitment patterns, it is paramount to factor in institutional size. To do so, I use the proportion of non-EU international students in a given institution and across levels of study.

Equally, previous research has identified that prospective students from certain countries are more likely to enrol in higher education programmes in particular destinations than others, also creating an uneven global flow of international students (Börjesson 2017; Findlay et al. 2017; She and Wotherspoon 2013). Moreover, some authors have provided speculative arguments about the concentration of international students in high-demand subjects, particularly in business-related fields, when most of these students are self-funded (Choudaha 2017), causing universities to shape their offering in line with what is valued in international education markets (Findlay et al. 2017). These, in turn, creates an uneven distribution of students in terms of their countries of origin and the subjects they study. In order to better understand these disparities, this section will also look at, together with the distribution of non-EU students across higher education institutions, the countries of origin of non-EU mobile students to the UK and the subjects they study.

### 2.1. Analysis by institution

In 2016/17, in my sample of HEIs (N=153), there were 140,355 first-year FTE non-EU international students enrolled in first degree, PGT and PGR courses. At first degree level, 148 HEIs<sup>29</sup> recruited a total of 54,315 first-year non-EU international students, an average of 365 per institution. Recruitment of first-year first degree non-EU international students in UK HEIs ranged from 2,150 –Coventry University– and 5 –the University of Suffolk, Leeds Trinity University and Glyndwr University. Moreover, some HEIs, despite having first degree provision, did not recruit any first-year non-EU international students –Newman University and SRUC. In terms of percentages of total first degree entrants, at the sector level, 11 percent came from outside the European Union, with the London School of Economics having the highest percentage of non-EU FTE students –40.7 percent– and Bishop Grosseteste University having the lowest – 0.2%.

At the postgraduate taught level, there were 77,280 first-year FTE non-EU international students enrolled in 152 institutions, an average of 510 students per institution. The institution that recruited the most non-EU international students at this level was University College London –3,420–, and 8 universities had less than 5 first-year FTE non-EU international students pursuing a PGT qualification: Buckinghamshire New University, Glyndwr University, Norwich University of the Arts, Rose Brudford College of Theatre and Performance, the University of Chichester, University of Cumbria, University of St Mark and St John, and the University of the Highlands and Islands. Furthermore, there were two universities that did not recruit any non-EU PGT

<sup>&</sup>lt;sup>29</sup> In this section, the numbers of HEIs recruiting non-EU international students differ at different levels of study. This is due to the fact that some institutions do not have offerings at all levels of study (e.g. Cranfield University is a postgraduate-only institution).

entrants: SRUC and the Institute of Cancer Research. In terms of percentages of total PGT entrants, at the sector level, 39 percent had their domiciles outside the European Union before they entered the UK to study. The shares of non-EU students across institutions ranged from 66 percent –Coventry University– and 0.3 percent –Leeds Trinity University.

At the postgraduate research level, there were, in 2016/17, 8,770 first-year FTE non-EU students enrolled in 144 HEIs that offered PGR programmes, an average of 60 students per institution. The university that recruited the most students was Cambridge –700– and the one that recruited the least was Leeds Trinity University (<5). There were also 10 universities that did not recruit any non-EU PGR entrants: the University of Suffolk, University for the Creative Arts, Trinity Laban Conservatoire of Music and Drama, the University of Chichester, the Arts University Bournemouth, the Royal Northern College of Music, the Norwich University of the Arts, Falmouth University, Buckinghamshire New University, Bishop Grosseteste University. Percentage-wise, the university that had the greatest share of non-EU international students was the London Business School –78.6 percent– and the institutions with the smallest percentage was St. George, University of London, with 2.4 percent of its PGR students coming from outside the European Union.

The numbers above make evident that the distribution of non-EU international students across UK HEIs was highly uneven in 2016/17. As well as the raw numbers, the shares of non-EU international students across universities also differed widely. Notwithstanding, the former may be explained by the overall size of institutions, measured as total enrolments from all domiciles. This is confirmed in figure 5.1, which shows scatterplots displaying the relationship between absolute numbers of first-year non-EU international students (Y) and absolute numbers of first-year students from all domiciles, for first-degree, postgraduate taught and postgraduate research students. The scatterplots also show a line of best fit.

While the relationship between the absolute numbers of non-EU international students and total enrolments is strong across all levels of education, it seems to be particularly strong among postgraduate taught and postgraduate research students. Coefficients of correlation confirm this. Among first-degree students, Pearson's R is 0.73 and R-squared is 0.53 (p-value <0.001). For postgraduate taught students, these values are 0.93 and 0.88 (p-value <0.001); and for postgraduate research students of students 0.97 and 0.96 respectively (p-value <0.001).

While these results are not surprising, they confirm that institutions' size affects their capacity to recruit non-EU international students in absolute terms. However, is this also the case when we look at proportions students in an institution who are non-EU international, as opposed to the raw numbers? There are different reasons why institutional size -as measured by total enrolmentsmay be related to the proportion of non-EU international students in UK universities. In a paper from 2006, Volkwein and Sweitzer (2006) suggest that the undergraduate reputation of American research universities and liberal arts colleges as measured by the U.S. News & Worlds Report (USNWR) annual survey of college presidents, provosts, and deans/directors of admissions is highly correlated to institutional size as measured by total enrolments. They argue that this may be the case as 'the budgets of public and private institutions alike are substantially enrolment driven' (ibid.: 142). In the case of UK higher education, UK universities are also increasingly reliant on recruitment for their finances (Brown and Carasso 2013; Williams 1997), which in turn would shape their capacity and appetite to increase their shares of non-EU international students. Figure 5.2 shows scatterplots displaying the relationship between the proportion of non-EU international students and total enrolments from all domiciles for first-year first-degree, postgraduate taught and postgraduate research students.



Figure 5.1. Relationship between absolute numbers of first-year non-EU international students (Y) and absolute numbers of first-year students (X) from all domiciles in the academic year 2016/17 for first degree, postgraduate taught and postgraduate research levels.



**Figure 5.2.** Relationship between the percentage of first-year non-EU international students (Y) and absolute numbers of total first-year students from all domiciles (X) in the academic year 2016/17 for first degree, postgraduate taught and postgraduate research levels of study

In the case of figure 5.2, we observe that the relationship between percentages of first-year non-EU international students and total enrolments are weaker than when considering counts of non-EU international students. This appears to be strongest at PGT level –Pearson's R 0.54 and R-squared 0.30 (p-value <0.001). For first degree students, Pearson's R is 0.17 and R-squared is 0.03 (p-value 0.04) and for PGR students, 0.18 and 0.03 respectively (p-value 0.03).

Figure 5.2 and the correlation coefficients suggest several things in relation to the nature of higher education provision in the United Kingdom that, in some cases, is consistent with the literature. First, figure 5.2.1. shows that, while there are some very large institutions that have significant shares of non-EU international students, there are equally large institutions that mostly cater for domestic – and potentially other EU– students. Similarly, these patterns appear to apply as well to smaller institutions. Second, figure 5.2.2. shows that universities with large PGT student bodies tend to have a larger share of non-EU international students. This is consistent with previous research that argues that, historically, postgraduate programmes have extensively relied on foreign populations (Bruch and Barty 1998; Findlay 2011; Williams 1987). It could be argued that institutions that historically had an extensive provision of postgraduate education, had to rely on recruiting foreign students in order to maintain it, hence reinforcing this relationship. Finally, figure 5.2.3. shows that there is significant variation in the shares of non-EU international students among those institutions with small numbers of PGR students from all domiciles, with these shares stabilizing as institutions get larger. This is not surprising considering that a large majority of UK higher education institutions -79 out of 153 sampled HEIs that had students undertaking a PGR programme- had, in 2016/17 less than 100 FTE first-year PGR students from all domiciles, making percentages of non-EU international students extremely sensitive to small changes in counts of students. That is the reason why, in the following lines, I will only include in my analysis those institutions that have at least a total of 100 first-year PGR students, a strategy that will also be extended to first degree and PGT students, as explained in chapter 4. Regarding the latter, there was, in 2016/17, only one university that recruited less than 100 first-year first degree students –

Courtauld Institute of Art– and 10 that recruited less that 100 first-year PGT students: the Royal Agricultural University, the Arts University Bournemouth, Ravensbourne, Writtle University College, the Royal Veterinary College, Rose Bruford College of Theatre and Performance, the Norwich University of the Arts, the University of Suffolk, the Institute of Cancer Research, and SRUC.

In the previous paragraphs, I have shown that there was, in 2016/17, substantial variation across UK higher education institutions in their recruitment of non-EU international students, both as counts and percentages. What does this variation look like across specific institutions? Tables 5.1 and 5.2 show the top 20 UK HEIs in terms of their non-EU international recruitment, in counts and percentages respectively across first degree, PGT and PGR levels. Moreover, table 5.1. displays the cumulative percentage of non-EU international students coming to the UK, showing that a significant majority of them are concentrated in a small number of HEIs.

Table 5.1. shows that over 50 percent of first-year PGR and PGT non-EU international students are concentrated in 20 institutions. This is not surprising in the case of PGR students, considering that most UK higher education institutions have small PGR programmes as measured by the size of their enrolments. Moreover, with the exception of a handful of universities, most higher education institutions that recruit the highest numbers of non-EU international students appear to be older or belonging to the Russell Group. It is remarkable, however, that Coventry recruits the most non-EU first degree students and has the highest share of non-EU international students in its postgraduate taught programmes.

First degree			PGT			PGR		
HEI	Non-EU	<i>Cum.</i> %	HEI	Non-EU	Cum. %	HEI	Non-EU	<i>Cum.</i> %
Coventry	2,150	4.1%	UCL	3,420	4.5%	Cambridge	700	8.1%
Liverpool	2,005	7.9%	Manchester	3,210	8.7%	Oxford	425	13.1%
Manchester	1,835	11.4%	Glasgow	2,500	11.9%	Manchester	395	17.7%
UCL	1,515	14.3%	Leeds	2,495	15.3%	UCL	380	22.1%
Arts London	1,375	16.9%	LSE	2,420	18.44%	Edinburgh	360	26.2%
Nottingham	1,100	19.0%	Edinburgh	2,335	21.5%	Imperial	355	30.4%
De Montfort	1,080	21.8%	Warwick	2,235	24.5%	Sheffield	245	33.2%
Edinburgh	1,050	23.1%	Birmingham	2,195	27.3%	Nottingham	230	35.9%
King's College	1,025	25.0%	King's College	1,960	29.9%	Liverpool	230	38.6%
Sheffield	1,015	27.0%	Sheffield	1,945	32.5%	Leeds	220	41.1%
Birmingham	950	28.8%	Southampton	1,855	34.9%	Southampton	190	43.3%
Portsmouth	945	30.6%	Coventry	1,765	37.2%	Birmingham	190	45.5%
Leeds	900	32.3%	Cardiff	1,685	39.4%	Newcastle	190	47.7%
Sussex	895	34.0%	Sussex	1,460	41.4%	Glasgow	190	50.0%
Warwick	875	35.7%	Imperial	1,455	43.3%	Warwick	150	51.7%
Imperial	825	37.2%	Newcastle	1,405	45.1%	King's College	150	53.4%
Huddersfield	795	38.7%	Oxford	1,370	46.9%	Durham	135	55.0%
Exeter	735	40.1%	Queen Mary	1,335	48.7%	York	125	56.4%
City University	735	41.5%	City University	1,305	50.4%	Queen's Belfast	125	57.8%
Cardiff	715	42.9%	Loughborough	1,220	52.0%	Queen Mary	125	59.3%

**Table 5.1.** Top 20 higher education institutions by recruitment of first-year first-degree, postgraduate taught and postgraduate research non-EU international students in 2016/17. Data shown in absolute numbers and cumulative percentages.

First degree		PGT		PGR	
HEI	% non-EU	HEI	% non-EU	HEI	% non-EU
LSE	40.7%	Coventry	66.0%	Brunel	53.6%
Buckingham	40.2%	Loughborough	65.0%	SOAS	53.4%
St Andrews	31.9%	Southampton	62.1%	Salford	50.2%
Imperial	31.5%	Leeds	61.8%	Bournemouth	45.9%
Arts London	30.4%	Warwick	61.6%	Anglia Ruskin	45.8%
UCL	28.9%	Manchester	61.4%	Aberdeen	42.8%
Liverpool	27.0%	Surrey	59.3%	LSE	42.6%
Coventry	25.6%	LSE	58.6%	Leicester	42.4%
Royal Coll Mus	23.5%	Liverpool	58.0%	St Andrews	41.8%
Royal Vet Coll	22.7%	Durham	57.7%	Manchester	41.7%
Manchester	22.5%	Glasgow	55.9%	Queen Mary	38.3%
City University	22.1%	Bath	55.3%	Portsmouth	37.9%
Sussex	20.6%	L'don Business	55.2%	Sheffield	37.4%
Guildhall	20.4%	Leicester	54.3%	Cranfield	36.9%
Edinburgh	18.9%	Sheffield	54.1%	Aston	36.7%
Huddersfield	18.5%	Cardiff	52.6%	Coventry	36.5%
King's College	18.4%	Queen Mary	52.5%	Liverpool	36.3%
Lancaster	17.8%	Sussex	52.3%	Middlesex	36.0%
Warwick	17.6%	Bristol	51.2%	Reading	35.4%
Sunderland	17.2%	Creative Arts	50.7%	Heriot-Watt	35.01%

**Table 5.2.** Top 20 higher education institutions by recruitment of first-year first-degree, postgraduate taught and postgraduate research non-EU international students as a proportion of total students in 2016/17.

## 2.2. Analysis by country of origin

Previous research confirms that the international mobility of students between countries present highly uneven patterns (Börjesson 2017). As Perkins and Neumayer argue: 'like other manifestations of globalisation, the sources and destinations of these migratory flows are highly uneven' (2014: 246). As suggested elsewhere, the most common type of student mobility is between 'developing countries (and especially the newly industrialising economy (NIE)<sup>30</sup> sub-grouping) to developed ones' (Perkins and Neumayer 2014: 247). In 2009, student mobility between developing to developed countries represented 56 percent of total student mobility (ibid.). In the context of this research, I use the World Bank's definition of 'developing' and 'developed', classifying countries based on their gross national income (GNI) per capita. This classification clusters countries based on the following income ranges (USD): low income countries (L) <= 1,005; lower middle income (LM) 1,006-3,955; upper middle income (UM) 3,956-12,235; and high-income (H)> 12,235 (World Bank data team 2016). To do the latter, I use data from 2016 (ibid.), the most recent year available in my dataset<sup>31</sup>. Student mobility to the United Kingdom, which belongs to the former category, display patterns that are consistent with the findings highlighted above. This will be reviewed in the following lines.

In my dataset, for the academic year 2016/17, non-EU international students came from 183 different countries. The number of countries varied across levels of study –169 for postgraduate research students, 182 for postgraduate taught students, and 175 for first-degree students<sup>32</sup>. Notwithstanding, this diversity is only nominal as the vast majority of students come from a handful of countries. Table 5.3 shows the top 20 sending countries of first-year non-EU international students for first degree, postgraduate taught, postgraduate research students.

<sup>&</sup>lt;sup>30</sup> Perkings and Neumayer 2014 define as 'Newly Industrialising Economy' the following countries: Brazil, China, India, Malaysia, Mexico, Philippines, South Africa, Thailand, Indonesia and Turkey.

<sup>&</sup>lt;sup>31</sup> For a classification of the countries included in the analysis by the World Bank classification, see Appendix 5.

<sup>&</sup>lt;sup>32</sup> I have excluded a fraction of the categories that HESA provided as non-EU students' countries of origin. These include macroregional categories were the country was not specified (e.g. 'Central America not otherwise specified'); British, French, Dutch, Australian and New Zealand overseas territories; and the disputed territory of Western Sahara. The total amount of students from these categories in 2016/17 mounted to 200, representing 0.06% of all non-EU students in UK higher education. The countries included in the analysis can be found in Appendix 5.

		PGT			PGR		
N	Cum. %	Country of origin	N	Cum. %	Country of origin	N	Cum. %
18,305	33.7%	China	35,285	45.7%	China	1805	20.6%
4,450	41.9%	India	5,070	52.2%	United States	840	30.2%
4,385	50.0%	United States	4,760	58.4%	Saudi Arabia	790	39.2%
1,970	53.6%	Nigeria	2,420	61.5%	Nigeria	505	45.0%
1,965	57.3%	Thailand	2,280	64.5%	India	450	50.1%
1,655	60.3%	Taiwan	1,615	66.6%	Indonesia	225	52.7%
1,550	63.2%	Hong Kong	1,435	68.4%	Malaysia	220	55.2%
1,090	65.2%	Saudi Arabia	1,390	70.2%	Mexico	220	57.7%
1,085	67.2%	Indonesia	1,350	72.0%	Thailand	200	60.0%
995	69.0%	Malaysia	1,230	73.6%	Pakistan	195	62.2%
905	70.7%	Canada	1,100	75.0%	Canada	195	64.4%
880	72.3%	Pakistan	1,065	76.4%	Turkey	160	66.2%
865	73.9%	Korea (South)	935	77.6%	Iran	135	67.8%
855	75.5%	Vietnam	925	78.8%	Korea (South)	130	69.3%
800	76.9%	Turkey	910	80.0%	Australia	115	70.6%
760	79.8%	Japan	750	80.9%	Hong Kong	115	71.9%
680	81.0%	Mexico	745	81.9%	Egypt	110	73.1%
600	82.1%	Singapore	700	82.8%	Singapore	105	74.3%
550	83.1%	Russia	550	83.6%	Kuwait	105	75.5%
535	84.1%	Bangladesh	550	84.3%	Chile	105	76.7%
	N 18,305 4,450 4,385 1,970 1,965 1,655 1,550 1,090 1,085 995 905 880 865 855 800 760 680 600 550 535	N Cum. %   18,305 33.7%   4,450 41.9%   4,385 50.0%   1,970 53.6%   1,965 57.3%   1,655 60.3%   1,550 63.2%   1,090 65.2%   1,085 67.2%   995 69.0%   905 70.7%   880 72.3%   865 73.9%   855 75.5%   800 76.9%   760 79.8%   680 81.0%   600 82.1%   550 83.1%   535 84.1%	PGT   N Cum. % Country of origin   18,305 33.7% China   4,450 41.9% India   4,385 50.0% United States   1,970 53.6% Nigeria   1,965 57.3% Thailand   1,655 60.3% Taiwan   1,655 63.2% Hong Kong   1,090 65.2% Saudi Arabia   1,095 67.2% Indonesia   1,085 67.2% Malaysia   905 70.7% Canada   880 72.3% Pakistan   865 73.9% Korea (South)   855 75.5% Vietnam   800 76.9% Japan   680 81.0% Mexico   600 82.1% Singapore   550 83.1% Russia	PGT   N Cum.% Country of origin N   18,305 33.7% China 35,285   4,450 41.9% India 5,070   4,385 50.0% United States 4,760   1,970 53.6% Nigeria 2,420   1,965 57.3% Thailand 2,280   1,655 60.3% Taiwan 1,615   1,550 63.2% Hong Kong 1,435   1,090 65.2% Saudi Arabia 1,390   1,085 67.2% Indonesia 1,350   905 69.0% Malaysia 1,230   905 70.7% Canada 1,100   880 72.3% Pakistan 935   855 75.5% Vietnam 925   800 76.9% Japan 750   680 81.0% Mexico 745   600 82.1% Singapore 700   550 83.1% Russia 550	PGT   N Cum. % Country of origin N Cum. %   18,305 33.7% China 35,285 45.7%   4,450 41.9% India 5,070 52.2%   4,385 50.0% United States 4,760 58.4%   1,970 53.6% Nigeria 2,420 61.5%   1,965 57.3% Thailand 2,280 64.5%   1,655 60.3% Taiwan 1,615 66.6%   1,550 63.2% Hong Kong 1,435 68.4%   1,090 65.2% Saudi Arabia 1,390 70.2%   1,085 67.2% Indonesia 1,350 73.6%   905 70.7% Canada 1,100 75.0%   880 72.3% Pakistan 1,065 78.4%   880 73.9% Korea (South) 935 77.6%   855 75.5% Vietnam 925 78.8%   800 76.9% Japan 7	PGTPGRNCum. %Country of originNCum. %Country of origin18,30533.7%China35,28545.7%China4,45041.9%India5,07052.2%United States4,38550.0%United States4,76058.4%Saudi Arabia1,97053.6%Nigeria2,42061.5%Nigeria1,96557.3%Thailand2,28064.5%India1,65560.3%Taiwan1,61566.6%Indonesia1,55063.2%Hong Kong1,43568.4%Malaysia1,09065.2%Saudi Arabia1,39070.2%Mexico1,08567.2%Indonesia1,35072.0%Thailand99569.0%Malaysia1,23073.6%Pakistan90570.7%Canada1,10075.0%Canada88072.3%Pakistan1,06576.4%Turkey86573.9%Korea (South)93577.6%Iran85575.5%Vietnam92578.8%Korea (South)80076.9%Japan75080.9%Hong Kong68081.0%Mexico74581.9%Egypt60082.1%Singapore70082.8%Singapore55083.1%Russia55083.6%Kuwait53584.1%Bangladesh55084.3%Chile	PGTPGRNCam. %Country of originNCam. %Country of originN18,305 $33.7\%$ China $35,285$ $45.7\%$ China $1805$ 4,450 $41.9\%$ India $5,070$ $52.2\%$ United States $840$ 4,385 $50.0\%$ United States $4,760$ $58.4\%$ Saudi Arabia $790$ $1,970$ $53.6\%$ Nigeria $2,420$ $61.5\%$ Nigeria $450$ $1,965$ $57.3\%$ Thailand $2,280$ $64.5\%$ India $450$ $1,655$ $60.3\%$ Taiwan $1,615$ $66.6\%$ Indonesia $225$ $1,550$ $63.2\%$ Hong Kong $1,435$ $68.4\%$ Malaysia $220$ $1,090$ $65.2\%$ Saudi Arabia $1,390$ $70.2\%$ Mexico $220$ $1,085$ $67.2\%$ Indonesia $1,350$ $72.0\%$ Malaysia $200$ $995$ $69.0\%$ Malaysia $1,230$ $73.6\%$ Pakistan $195$ $905$ $70.7\%$ Canada $1,100$ $75.0\%$ Canada $195$ $880$ $72.3\%$ Pakistan $1,065$ $76.4\%$ Turkey $160$ $865$ $73.9\%$ Vietnam $925$ $78.8\%$ Korea (South) $130$ $800$ $76.9\%$ Japan $75.0\%$ Rora (South) $115$ $680$ $81.0\%$ Mexico $745$ $81.9\%$ Hong Kong $115$ $680$ $81.0\%$ Mexico $75.0\%$ $81.9\%$ Egypt $11$

Table 5.3. Top 20 sending countries of first-year non-EU international students to UK higher education in 2016/17 for first degree, postgraduate taught and postgraduate research levels of study.

Table 5.3 suggests some issues regarding the uneven geographies of international mobility flows. First of all, China leads all tables by a substantial difference. In the case of PGT students, Chinese students represented almost half of all non-EU students that started a PGT program in 2016/17. Moreover, it is also remarkable that the vast majority of non-EU international students come from a handful of countries. This is consistent with the argument from Findlay and colleagues that 'it is the power of marketization and the practices that flow from it that have been critical in narrowing the range of origin countries from which the main flows international students come' (2017: 149). It is reasonable to think that, while there is considerable demand from the bunch of countries that send most of UK non-EU international students, if the countries of origin of non-EU international students 'were a function of demand alone, then a much wider range of origin countries would be engaged in international student flows to the UK and elsewhere, reflecting not only educational "need" but also the global desire of many middle-class parents to encourage their children to achieve the academic credentials associated with graduation from a world-class English language university' (ibid.).

The importance of China, together with other Asian countries, is reflected on the shape of mobility flows from world continents<sup>33</sup> to the UK. Table 5.4 displays the latter. The vast majority of students across all levels of study came from Asia, 68% at first degree level, 71% at PGT level, and 45% at PGR level. The continent that sent the least non-EU international students was Australasia, representing less than 1% of all non-EU international entratns at first degree and PGT levels and less 2% among students undertaking a PGR programme.

<sup>&</sup>lt;sup>33</sup>In this research, I have used the classification of countries by continent provided by HESA, which clusters them into 7 continents/world regions: Asia, North America, South America, Africa, Middle East, Australasia and Europe. For a classification of the countries included in the analysis by world continents/regions, see Appendix 5.

Continent	First degree		PGT		PGR	
	N	%	N	%	N	%
Asia	36,855	67.90%	54,665	70.78%	3,975	45.35%
North America	3,650	6.73%	7,310	9.46%	1,310	14.95%
Africa	4,475	8.25%	5,700	7.38%	1,095	12.49%
Middle East	5,140	9.47%	4,305	5.57%	1,505	17.17%
Europe (non-EU)	3,435	6.33%	2,950	3.82%	440	5.02%
South America	455	0.84%	1,695	2.19%	290	3.31%
Australasia	265	0.49%	615	0.80%	155	1.77%

**Table 5.4.** Non-EU international students by continent of origin and level of study (2016/17). Numbers are shown both as counts and as percentages of total non-EU students.

Tables 5.5 and 5.6 look at the countries of origin of first-year non-EU international students clustered by NIE and the World Bank income-based classification of countries respectively. Figures in table 5.5 are consistent with what I have reviewed above: a handful of densely populated countries with a growing middle-class appear to dominate international student mobility to the UK. It is also remarkable that, as shown in table 5.6, countries classified as 'low income' sent very small numbers of non-EU international students to the UK in 2016/17, less than 2% of all non-EU international students came from low income countries across all levels of study.

NIE	First d	egree	PGT		PGR	
	Ν	%	Ν	%	Ν	<sup>0</sup> / <sub>0</sub>
Member	26,670	49.1%	47,715	61.8%	5,325	39.3%
Non-member	27,600	50.8%	29,515	38.2%	3,445	60.7%

**Table 5.5.** Non-EU international students by whether their country is a Newly Industrialised Economy (NIE) and level of study (2016/17).

World Bank	First c	legree	PGT		PGR	
classification	Ν	%	Ν	%	Ν	%
High income	18,560	34.2%	17,005	22.1%	3,105	35.4%
Upper-middle income	26,790	49.4%	44,880	58.1%	3,390	38.7%
Lower-middle income	8,345	15.4%	14,425	18.7%	2,125	24.2%
Low income	585	1.1%	925	1.2%	145	1.7%

**Table 5.6.** Non-EU international students by the World Bank classification of their country of origin and level of study (2016/17).

Also, it seems that students are more evenly distributed at PGR level, which could be interpreted as a symptom of the fact that PGR programmes as not subject to the levels of marketization found in the provision of first degree and PGT courses (Hogan 1997).

# 2.3. Analysis by subject of study

As identified in chapter 3, previous research suggests that the nature of the provision of international higher education does not only manifests unevenly across destinations –countries and institutions– and countries of origin, but also the subjects international students study. It could be argued that, although historically dynamic, there is a hierarchy of value attached to subjects of study, with current perceptions of this value attached to what Brown, Lauder and Ashton call 'celebrity careers', described as those having the 'lure of big prizewinners at the top industries like finance, law, business, fashion, and the media' (Brown et al. 2011). In this sense, Choudaha (2017) argues that student mobility in these 'prizewinner' subjects becomes ubiquitous among self-funded students, a phenomenon that was galvanised by the 2007-2008 financial crisis. He argues that the 1990s were characterised, in terms of policy-making regarding international students, by an emphasis on increasing demand for highly-skilled talent with growing importance of information and communication technologies (ICT), which 'witnessed an increase in enrolment of international students in fields related to science, technology, and engineering' (ibid.: 827). However, after the financial crisis that brought about 'severe budget cuts in the higher education sector in many
countries' and 'the decline in funding for research programmes', meant that 'most students in this [period] were self-funded and concentrated in business' (ibid.: 828). Looking at the supply side – i.e. higher education institutions– Findlay et al. (2017) suggest that the offering of certain subjects by universities, particularly the ones that are appealing to an international market, can be thought as a strategy to increase recruitment of non-EU international students.

In the following lines, I provide a basic description of the distribution of non-EU international students across subjects of study, and the share of non-EU international students across these subjects for the academic year 2016/17, again across all levels of study. In this thesis, cost centres have been used as a proxy for the field of study of non-EU international students. Moreover, this cost centres (N=46) have been re-categorised using a classification developed by Purcell and colleagues (Purcell et al. 2009), which 'derives form empirically observed differences of graduates' aspirations and outcomes across the following four areas: STEM; Law, Economics and Management; non-STEM academically focused degrees; and vocationally focused degrees.

Tables 5.7 and 5.8 look at the distribution of first-year non-EU international students across the top 20 HESA cost centres in terms of non-EU international student recruitment and Purcell, Elias and Atfield's (2009) classification respectively in the academic year 2016/17. Numbers are presented for first degree, postgraduate taught and postgraduate research levels of study.

First degree			Postgraduate taught				Postgraduate research				
Cost centre	Non-EU	<i>Cum.</i> %	% Non-EU	Cost centre	Non-EU	Cum. %	% Non-EU	Cost centre	Non-EU	Cum. %	% Non-EU
Business & management	15,550	29%	23.4%	Business & management	27,645	36.2%	65.5%	Business & management	765	9%	52.5%
Law	4,005	36.7%	16.9%	Economics & econometrics	<b>4,15</b> 0	41.7%	72.5%	Clinical medicine	640	16.1%	22.4%
Economics & econometrics	2,925	42.2%	24.0%	Law	<b>3,</b> 670	46.5%	37.8%	Biosciences	555	22.6%	21.2%
Art & design	2,720	47.5%	10.1%	Art & design	3,065	50.5%	46.2%	IT, systems sciences & computer software engineering	555	28.9%	44.2%
Mathematics	2,595	52.3%	16.7%	Education	<b>2,</b> 940	54.4%	9.8%	Electrical, electronic & computer engineering	500	34.6%	50.6%
Mechanical, aero & production engineering	2,135	56.3%	19.2%	Architecture, built environment & planning	2,760	58.0%	40.1%	Mechanical, aero & production engineering	415	39.4%	39.1%
Electrical, electronic & computer engineering	1,935	59.9%	22.4%	IT, systems sciences & computer software engineering	2,585	61.4%	43.6%	Education	355	43.5%	29.5%
Biosciences	1,790	63.3%	6.7%	Media studies	2,470	64.6%	45.7%	Chemistry	320	47.2%	24.7%
IT, systems sciences & computer software	1,770	66.7%	7.9%	Politics & international studies	<b>2,2</b> 70	67.7%	40.0%	General engineering	295	50.6%	37.4%

engineering

Architecture, built environment & planning	1,505	69.5%	15.3%	Electrical, electronic & computer engineering	2,020	70.3%	68.1%	Architecture, built environment & planning	255	53.5%	51.7%
Media studies	1,300	71.9%	7.9%	Mechanical, aero & production engineering	1,850	72.7%	45.8%	History	240	56.3%	25.7%
Politics & international studies	1,180	74.1%	11.7%	General engineering	1,495	74.6%	64.3%	Politics & international studies	235	59.0%	40.7%
General engineering	1,105	76.2%	16.7%	Civil engineering	1,465	76.5%	59.4%	Law	235	61.6%	38.8%
Psychology & behavioural sciences	1,030	78.0%	4.8%	Clinical medicine	1,435	78.4%	25.5%	English language & literature	215	64.1%	25.6%
English language & literature	1,015	79.9%	7.1%	Mathematics	1,380	80.2%	54.0%	Mathematics	210	66.5%	26.8%
Clinical medicine	895	81.6%	11.2%	Modern languages	1,300	81.9%	48.1%	Modern languages	205	68.8%	35.8%
Civil engineering	895	83.2%	22.6%	Music, dance, drama & performing arts	1,285	83.5%	34.0%	Earth, marine & environmental sciences	195	71.0%	24.5%
Modern languages	880	84.8%	8.6%	Biosciences	1,260	85.2%	24.9%	Physics	190	73.2%	17.1%
Music, dance, drama & performing arts	850	86.4%	5.6%	Anthropology & development studies	1,250	86.8%	59.6%	Civil engineering	180	75.3%	48.1%
Pharmacy & pharmacology	645	87.6%	14.8%	Psychology & behavioural sciences	1,075	88.2%	15.1%	Mineral, metallurgy & materials engineering	170	77.2%	48.6%

**Table 5.7.** Top 20 HESA cost centres recruiting first-year non-EU international students in 2016/17 for all levels of study. Numbers are shown as counts, cumulative percentages, and non-EU students as the percentage of total students in each cost centre.

Purcell et al. 2009		First degree	PGT	PGR
LEM (Law, Economics and Management)	Non-EU	23,285	36,310	1,160
	% of non-EU	42.91%	47.03%	13.24%
	% of total students	22.10%	62.00%	48.90%
STEM incl Medicine	Non-EU	18,075	17,895	4,895
	% of non-EU	33.31%	23.18%	55.83%
	% of total students	11.10%	36.60%	28.60%
Vocationally-focused	Non-EU	7,950	14,435	1,130
	% of non-EU	14.65%	18.70%	12.88%
	% of total students	5.30%	21.20%	28.90%
Academically-focused	Non-EU	4,955	8,570	1,585
	% of non-EU	9.13%	11.10%	18.05%
	% of total students	6.60%	37.00%	31.50%

**Table 5.8.** Distribution of first-year non-EU international students across Purcell et al. (2009) categories of subjects in 2016/17. Numbers are shown as counts, percentages of total non-EU students, and non-EU students as the percentage of total students in each category.

In table 5.7, we observe that the most popular cost centre across all levels of study is 'business and management'. Around one third of first degree and PGT non-EU entrants were enrolled in courses in that cost centre. The picture is less unevenly distributed among postgraduate research students, with 10 percent of non-EU students enrolled in 'business and management' courses. This cost centre is also highly international in terms of the composition of the students pursuing a degree in this subject. At first degree level, 24 percent of students pursuing a degree in 'business and management' came from outside the EU, 66 percent at PGT level and 53 at PGR level.

This is consistent with the findings in table 5.8. What we observe in the latter table is that, while LEM subjects are the most popular ones among first degree and PGT levels, STEM subjects dominate among non-EU postgraduate research students. This results are consistent with Choudaha's argument that, at doctoral level, with more research funding available, 'most students [concentrate in] science and engineering', while in a context of marketization, where most students are 'self-funded [they] concentrate in business' (2017: 828).

# 3. What explains the variation in the proportions of students who are non-EU international

## in UK HEIs in 2016/17? Findings from bivariate statistics

This section seeks to explain the variation in the distribution of the proportions of students who are non-EU international across UK higher education institutions in 2016/17 by making use of bivariate statistics. I examine five predicted drivers –as identified in chapters 3– of the institutional variation in the proportion of students who are non-EU-international, considering first-degree, PGT and PGR separately as before. These predicted drivers are grouped into two broad categories: 1) institutional characteristics, and 2) institutional strategies targeting non-EU international students.

First, I test the hypothesis that the proportion of students enrolled at an institution who are non-EU-international varies across certain institutional characteristics, namely institutional prestige and geographical location. I hypothesise that shares of non-EU international students tend to be higher at more prestigious institutions, as indexed by national and international league table rankings, mission group categories and classifications that factor in dimensions of vertical stratification (cf. Teichler 2017a). Moreover, I test the hypothesis that the percentage of students who are non-EU-international tends to be higher for institutions located in major metropolitan areas, and in London in particular.

Second, I explore the association between shares of non-EU international students and measurements that may capture strategies that institutions follow to recruit more students coming from outside the EU. First, I look at whether HEIs that set up a satellite campus in London had higher shares of non-EU international students, with the hope that non-EU international students would be 'more attracted to London than to the home campus' (QAA 2014: 1). Second, I test the hypothesis that the share of students who are non-EU-international tends to be higher in institutions where such students are highly concentrated by discipline, most notably in courses related to Business and allied subjects. Third, I test the hypothesis that the percentage of students who are non-EU international tends to be higher in institutions where such students are drawn from a narrower range of countries of origin, most notably China which is, as explored in the previous section, the largest source of non-EU-international students for the UK.

#### 3.1. Theoretical considerations

These five predicted drivers are drawn from theoretical considerations found in previous studies seeking to explain the distribution of non-EU international students across UK higher education institutions, reviewed here in chapter 3. In the following lines, I provide a summary of these. First, in terms of the relationship between institutional prestige and recruitment of non-EU international students, is closely related to the concept of vertical differentiation. Vertical differentiation among higher education institutions can be defined as 'the extent to which [differentiation] can be mapped along a single vertical dimension, associated with the status of institutions and their capacity to attract well-qualified and high-status students' (Croxford and Raffe 2015: 1625). A similar definition is offered by Teichler (1996: 118, in Marginson 2017: 1): 'vertical diversity distinguishes HEIs by "quality, reputation and prospective status of graduates'''. It is important to note that, according to Teichler himself, attention to this form of diversity has increased since the 1980s, with 'extreme modes of vertical diversity [...] more frequently advocated as options to embark into world-wide competition for "world-class university" (2008: 349).

Second, it is argued that 'some international students' choice of destination may have just as much to do with the distinction [of place] as of the formal education on offer' (Prazeres et al. 2017: 114). As reviewed in chapter 3, this research hypothesises that distinction attached to cities, which materialises into hierarchies of geographical locations, interact with institutional hierarchies in shaping international student mobility. As argued by Brooks and Waters, 'the "distinctive quality" of place [...] might attract international students to less reputable higher education institutions' (Brooks and Waters 2018: 5). In the UK, London sits by far at the top of the hierarchy. London, one the world's global cities (cf. Sassen 1991), concentrates 'the best [job] opportunities' (Friedman and Laurison 2019: 24). In this sense, 'Tindal and colleagues, in the context of a research project exploring the motives of Scottish students moving to England, argued that their participants discussed 'the significance of [London], revealing an attraction to affiliating with a global city because of its economic and cultural opportunities' (Tindal et al. 2015: 96). Moreover, qualitative research has shown that international students in England that did not study in London, developed 'powerful imaginative geographies' that had London 'as a representative of the rest of England', 'overshadowing their understanding of their chosen study site' (Beech 2014: 170). Thus, I expect to find that those higher education institutions based in London have higher shares of non-EU international students. Moreover, Collins argues that 'key cities are tied to imaginative geographies of them as desirable places, inducing "aspirations to become mobile" amongst international students' (2014: 243, in Brooks and Waters 2018: 5). If this is true, we would also expect to find higher shares of non-EU international students in urban centres, particularly in what Pike and colleagues have called 'core cities' –i.e. twelve major population and economic centres defined as 'the principal cities of their city regions, hosting high-level services and anchor institutions that attract investment and people' (Pike et al. 2016: 2).

Moreover, according to the corpus of literature dealing with international student mobility, there are certain strategies universities may be able to pursue to make their provision more attractive to international students. These strategies, as explained in chapter 3, are thought to be heavily influenced by what Marginson calls 'the segmentation of global competition' (2006: 20). According to Marginson, 'global competition [like national competition] is powered by an elite/mass dualism created by the exclusionary logic of the positional market'. Subordinated to elite institutions, there is a sector –the 'mass higher education' (ibid.)– that is 'revenue driven, expansionary and often commercial' (ibid.). It is, in the latter sector, that we expect to find higher instances of these strategies. In this sense, as identified by Findlay et al. in a research project investigating marketization practices in the delivery of higher education to international students in UK universities, international officers considered 'the practices that [they] need to employ in

order to attract international students' (2017: 148), including the differentiation of degree products and targeting particular markets –i.e. countries– where there is demand and funding. First, there is one strategy that some HEIs have recently started to pursue 'to increase the recruitment of international students who would be more attracted to London than to the home campus' (QAA 2014: 1), which could be understood as a strategy that seeks to partially change the ascribed characteristics of HEIs. It has been reported that, in the last decade, UK universities based outside London have started to open satellite campuses in London 'primarily with an international student market in mind' (Brooks and Waters 2018: 1). This signals two issues. First, certain geographical locations are more appealing than others to mobile people, as explained in the previous paragraph. Second, UK universities tap into this hierarchy of geographic locations in order to make themselves more appealing.

Furthermore, a strategy that is highlighted by international officers that makes their provision attractive is 'to have a very strong PGT offering that is business-based' (Findlay, Mccollum, and Packwood 2017: 148), underscoring how hierarchies of value work in the context of globalised higher education. In the case of the UK, fields of study including engineering, technology, business, are regarded as being among 'the more remunerative fields' (Iannelli, Gamoran, and Paterson 2018: 11). In the case of the US, evidence suggests that, in recent decades, 'large numbers of students attracted to celebrity careers and the lure of big prizewinners at the top industries like finance, law, business, fashion and the media' (Brown et al. 2011). Thus, one strategy universities may pursue to make their provision more attractive to non-EU international students is increasing their offering in high-demand fields of study. Moreover, HEIs may also target specific countries. In this sense, Findlay and colleagues define that marketization can be defined 'as a process producing selective supply-side practices in terms of the selection of the locations for student recruitment' (Findlay et al. 2017), particularly through the use of recruitment agents and agencies. In this sense, 'agents and agencies from key markets such as China and India [are] considered especially important' (ibid.: 147). All the elements briefly introduced above describing differences among UK institutions are usually referred to in the literature to explain uneven patterns of non-EU international student recruitment (cf. Brooks and Waters 2013; Cebolla-Boado, Hu, and Soysal 2018; Findlay 2011; Marginson 2018). However, to my knowledge, there is no piece of research looking at how all these factors contribute to these uneven patterns. This thesis –and this chapter– seeks to address this gap. To do so, I produce bivariate statistics assessing the relationship between the main dependent variable in our analysis –the proportion of non-EU international students in a given institution– and a set of explanatory variables that seek to capture institutional characteristics across vertical and horizontal dimensions in UK higher education, and the strategies institutions may pursue in order to recruit more non-EU international students. It is important to highlight that these strategies are also dependant on the universities' position in institutional hierarchies (Marginson 2008).

## 3.2. Variables included in the analysis

The explanatory variables capturing the five predicted drivers described above included in these chapter's analysis are discussed in section 4.1 of chapter 4 "Data and Methods". In the latter chapter, I also describe the process by which these variables have been operationalised. Table 5.9 provides a summary of these variables.

Variable name	Summary
Institutional prestige	
HEI types	Classification of HEIs by whether they are Golden Triangle, other Russell Group, other pre-1992, and post-1992.
Boliver 2015	Classification of HEIs using Boliver (20150 clusters.
CUG 2017	HEIs' league table position in the Complete University Guide 2017 league table.
The Guardian 2017	HEIs' league table position in The Guardian 2017 league table.

THE 2015	Classification of HEIs by whether they were ranked among the top 100 HEIs in the Times Higher Education 2015 World Ranking, ranked below the top 100 or not ranked.
ARWU 2015	Classification of HEIs by whether they were ranked among the top 100 HEIs in the ARWU 2015 World Ranking, ranked below the top 100 or not ranked.
Geographical location	
NUTS1	NUTS1 regions where HEIs are located.
HoC classification	Classification of settlements where HEIs are located by population size.
Distance to KX	Distance, in minutes, to King's Cross train station from HEIs' corresponding postcodes in public transportation.
Strategies	
Campus in London	HEIs with a satellite campus in London.
Non-EU LEM	Percentage of non-EU students studying a degree belonging to Law, Economics or Management (LEM).
Simpson's D	Simpson's diversity index $(D)$ measuring the probability that two randomly selected students from a HEI are from two different countries.

Table 5.9. Summary of the variables used in this chapter's bivariate analysis.

The explanatory variables used in this section take two forms: categorical and continuous. I measure the association between categorical variables and the proportions of students in an institution who are non-EU international using  $\eta$  (eta) and  $\eta^2$ (eta-squared), two measures of association between categorical and continuous variables that are common in educational research (Trigo-Sánchez and Martínez-Cervantes 2016).  $\eta$  (eta) 'measures the degree of association between the two variables' and 'the square of the correlation ration  $\eta^2$ (eta-squared) [...] measures the proportion of the variation in Y that is associated with membership of the different groups defined by X' (Richardson 2011: 136). When assessing the strength of the relationship between two continuous variables, I use Pearson's correlation coefficient –known as r-, which is the standardization of the covariance of two continuous variables. This produces a figure that has to

lie between -1 and +1, the former meaning perfect negative correlation and the latter perfect positive correlation (Field 2009: 170).

#### 3.3. Institutional reputation

Previous research indicates that there is a relationship between the recruitment of non-EU international students and the reputation of higher education institutions (Cebolla-Boado et al. 2018; Marginson 2018a; Tannock 2018). Notwithstanding, to my knowledge, research that has explored this relationship do not factor in institutional size. In this section, I explore the relationship between different measures of institutional prestige and the recruitment of non-EU international students as a proportion of the student body, in order to remove any potential size bias.

First, I explore whether there is evident variation in HEIs' percentages of non-EU international students across different *HEI types*. Figure 5.3 displays boxplots showing the distribution of the percentages of students that are non-EU international across *HEI types*. Table 5.10 shows the mean percentages of non-EU students across *HEI types* and measures of association between the former and the latter.

In general terms, what we see in figure 5.3 is that, on average and across all levels of study, Golden Triangle and other Russell Group universities have larger shares of non-EU international students than other pre-1992 and post-1992 universities. Notwithstanding, there is also significant variation across universities, particularly across other pre-1992 and post-1992 universities. There are certain universities belonging to the latter groups that appear particularly successful at having large shares of students who are non-EU international. Moreover, the differences between HEI types seem to be much less stark at PGR level. This is supported further in the coefficients of correlation shown in table 5.10. According to  $\eta^2$  values, 29 percent (p<0.001) of the variation between universities in the percentages of students who are non-EU international can be explained by the variable *HEI types* at first degree level, 42 percent (p<0.001) at PGT level and 3 percent (not significant) at PGR level.



**Figure 5.3.** Institutional percentages of non-EU international students across first-degree, PGT and PGR levels of study. Institutions are classified by type –Golden Triangle, other Russell Group, other pre-1992 and post-1992.

Mean percentages and SD	First degree	PGT	PGR
Golden Triangle	24.8 (11.5)	46.8 (7.2)	32 (6.3)
N of HEIs	6	6	6
Other Russell Group	14.2 (5.1)	51.4 (9.9)	31.1 (5.7)
N of HEIs	18	18	18
Other Pre-1992	12.5 (8.1)	35.9 (14.9)	31.9 (10.5)
N of HEIs	37	40	27
Post-1992	6.5 (5.7)	19.7 (14.3)	27.2 (12.3)
N of HEIs	86	78	14
Measures of association			
η	0.555***	0.652***	0.196 (n.s.)
$\eta^2$	0.308***	0.425***	0.038 (n.s.)

**Table 5.10.** Mean percentages and standard deviations (in parentheses) of non-EU international students across HEI types and measures of association between percentages of non-EU international students and HEI types. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Table 5.10 findings suggest that, on average, 25 percent of first-year first degree students at Golden Triangle universities come from outside the EU, 18 percent points more than in post-1992 HEIs (7 percent). At the PGT level, this difference is significantly greater, with Golden Triangle (48 percent of students are non-EU international) universities having shares of non-EU students 27 percent points higher than post-1992 HEIs (20 percent). Notwithstanding, in the latter case, other Russell Group universities have the largest share of non-EU international students, 52 percent. The picture is evidently different at PGR level, with the differences in average percentages of non-EU students between HEI types being markedly smaller. In this case, the share of non-EU PGR students at Golden Triangle universities (3 percent) is 5 points larger than at post-1992 HEIs (28 percent).

I find similar patterns when looking at the variation of percentages of non-EU international students across Boliver 2015 clusters. Figure 5.4 shows boxplots displaying the distribution of percentages of non-EU students across HEIs classified by *Boliver 2015*.



Figure 5.4. Institutional percentages of non-EU international students across first-degree, PGT and PGR levels of study. Institutions are classified by Boliver clusters (2015).

Table 5.11 shows the mean percentages of non-EU students across Boliver clusters and measures of association between the latter variables.

Mean percentages and SD	First degree	PGT	PGR
Cluster 1	12.8 (1.7)	46.9 (3.1)	35.3 (0.01)
N of HEIs	2	2	2
Cluster 2	15.8 (7.9)	48.4 (10.8)	31.8 (8)
N of HEIs	39	39	38
Cluster 3	8.1 (5.9)	23.5 (14.4)	28.8 (12.2)
N of HEIs	18	65	23
Cluster 4	2.8 (2.9)	9.6 (12.4)	46.7 (.)
N of HEIs	18	17	1
Measures of association			
η	0.579***	0.734***	0.260 (n.s.)
$\eta^2$	0.336***	0.538***	0.067 (n.s.)

**Table 5.11.** Mean percentages and standard deviations (in parentheses) of non-EU international students across Boliver clusters (2015) and measures of association between percentages of non-EU international students and HEI types. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Again, figure 5.4 and table 5.11 suggest significant differences of percentages of non-EU students across HEIs when classified by Boliver's clusters. At first-degree level, Cluster 1 –Oxford and Cambridge– had a mean share of non-EU international students of 13 percent, 10 percent point more than Cluster 4 HEIs –3 percent. Differences are larger at the PGT level, with Oxford and Cambridge and Cluster 2 universities having average shares of 47 and 48 percent respectively, 37 and 38 percent points more than Cluster 4 universities –10 percent. Similarly to *HEI types*, at the PGR level, differences are less evident. All clusters have average shares around 30 percent. In this case, however, there is just one university that recruited at least 100 PGR students from all domiciles in Cluster 4 –Anglia Ruskin University–, which had a considerable share of non-EU students (47 percent). This differences within and between levels of study are also reflected in the measures of association.  $\eta^2$  values indicate that, at first degree level, Boliver 2015 clusters explain

34 percent of variation, (p-value<0.001), 54 percent at PGT level (p-value<0.001) and 7 percent (not significant) at PGR level.

We also find significant variation in the percentages of students who are non-EU international when using league table positions as an explanatory variable, particularly at first degree and PGT levels. Figures 5.5 and 5.6 display scatterplots showing the relationship between HEIs' percentages of non-EU international students and Complete University Guide 2017 and the Guardian 2017 league tables respectively. Table 5.12 puts forward the Pearson's R and R-squared values for the latter relationships across all levels of study.

Interestingly, the level of linearity of this relationship, particularly at first degree and PGT levels, is quite high. The Complete University Guide 2017 league table positions explain 35 (p-value<0.001), 61 (p-value<0.001), and 2 (not significant) percent of the variation in the shares of non-EU international students at first degree, PGT and PGR levels respectively. The Guardian 2017 league table positions have similar values, explaining 36 (p-value<0.001), 54 (p-value<0.001), and 2 (not significant) percent of the variation respectively.

In all cases, and consistent with the findings found when using *HEI types* and *Boliver 2015* as explanatory variables, institutional reputation in the form of league table positions appear to have more explanatory power at PGT level, followed by first degree provision. Notwithstanding, this does not seem to apply at PGR level.



Figure 5.5. Correlation between percentages of non-EU international students and league table position in The Complete University Guide 2017 League Table for all levels of study –first degree, PGT, PGR.



Figure 5.6. Correlation between percentages of non-EU international students and league table position in The Guardian 2017 League Table for all levels of study –first degree, PGT, PGR.

Correlation coefficients	First degree	PGT	PGR
Complete University Guide 2017			
N of HEIs	127	124	64
Pearson's r	0.588***	0.782***	0.143 (n.s.)
R-squared	0.345***	0.612***	0.02 (n.s.)
The Guardian 2017			
N of HEIs	119	118	64
Pearson's r	0.603***	0.738***	0.166 (n.s.)
R-squared	0.364***	0.545***	0.027 (n.s.)

**Table 5.12.** Pearson's *r* and R-squared for the relationship between the percentages of non-EU international students and HEIs' position in the Complete University Guide and the Guardian league tables (2017). Also, number of HEIs for each level of study included in the analysis. Significance levels: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Again, an exploration of the relationship between shares of non-EU international students and the variables *THE 2015* and *ARWU 2015* yield strikingly similar results, highlighting a consistent effect from different measures of institutional reputation. Figures 5.7 and 5.8 display boxplots showing the variation in the percentages of non-EU international students by *THE 2015* and *ARWU 2015* categories. Table 5.13 reports mean percentages across these categories and displays measures of association between these and the percentage of non-EU international students. In all cases, we see that these categories have a strong explanatory power at first degree and PGT levels but not at PGR level.



Figure 5.7. Institutional percentages of non-EU international students across firstdegree, PGT and PGR levels of study. Institutions are classified by whether they were ranked in the top 100 in the THE 2015 ranking, ranked below 100 or not



**Figure 5.8.** Institutional percentages of non-EU international students across firstdegree, PGT and PGR levels of study. Institutions are classified by whether they were ranked in the top 100 in the ARWU 2015 ranking, ranked below 100 or not ranked.

Means and SD	First degree	N of HEIs	PGT	N of HEIs	PGR	N of HEIs
THE 2015						
Top 100	20.1 (7.2)	9	50.5 (7.8)	9	31.3 (6.4)	9
Other ranked	15.1 (7.9)	27	48.5 (10.2)	28	33.3 (8.1)	27
Not ranked	8.2 (6.9)	111	23.3 (15.6)	105	29.1 (11.8)	29
Measures of association						
η	0.459***		0.623***		0.2 (n.s.)	
$\eta^2$	0.211***		0.389***		0.04 (n.s.)	
ARWU 2015						
Top 100	20.9 (9.9)	11	51.7 (7.4)	11	32.6 (7.1)	11
Other ranked	13 (6.1)	34	41.6 (15.2)	34	32.1 (8.2)	30
Not ranked	8.1 (7.2)	102	23.5 (16)	97	29.3 (12.4)	24
Measures of association						
η	0.458***		0.545***		0.148 (n.s.)	
$\eta^2$	0.21***		0.297***		0.022 (n.s.)	

**Table 5.13.** Mean percentages and standard deviations (in parentheses) of non-EU international students across institutions classified by whether they were ranked in the top 100 in the THE and ARWU 2015 rankings, ranked below 100 or not ranked and the respective measures of association. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

## 3.4. Geographical location

As suggested in previous research, HEIs' geographical environments may have differing levels of appeal to mobile people, and to mobile students in particular (cf. Prazeres et al. 2017; Brooks and Waters 2018; Beech 2014). In the case of the UK, it has also been underscored that London, and its idiosyncrasy as a global city (Sassen 1991), has special pulling power when international students are making decisions about where to study. This section seeks to explore whether this theoretically-informed relationship exists when factoring institutional size in.

First, I analyse the relationship between percentages of non-EU international students across HEIs categorised by their NUTS1 regional location. Throughout this analysis, I do not consider universities with a satellite campus in London as being located in London. Instead, these 13 HEIs are categorised by the region of their home campus. Figures 5.9, 5.10 and 5.11 show boxplots of the distribution of the shares of non-EU students across HEIs classified by their NUTS1 regions, at first degree, PGT and PGR levels respectively. Table 5.14 displays the mean percentages across NUTS1 regions and the measures of association between the percentages of non-EU international students and NUTS1 regions.

Surprisingly, as opposed to what is expected from what we see in the literature, the regional location of HEIs does not appear to have a strong effect in shaping their percentages of non-EU international students. While London has high values across all levels of study –these are the highest at first degree and PGR levels–, the differences between them and the ones found in other regions do not appear to be significant. In this case, we observe that NUTS1 regions has more explanatory power at PGR level, although the measures of association do not bear statistical significance. As shown in table 5.14, 23 percent (not significant) of the variation across HEIs in terms of their percentages of non-EU international students is explained by the variable *NUTS1*. These values are much lower at first degree and PGT levels –9 and 5 percent respectively (not significant).



Figure 5.9. Percentages of first-degree non-EU international students by HEIs across UK NUTS1 regions.



Figure 5.10. Percentages of PGT non-EU international students by HEIs across UK NUTS1 regions.



Figure 5.11. Percentages of PGR non-EU international students by HEIs across UK NUTS1 regions.

Mean percentages and SD	First degree	N of HEIs	PGT	N of HEIs	PGR	N of HEIs
London	14 (10.1)	31	32.7 (15.5)	32	38.9 (11.4)	8
East of England	8.71 (5.08)	9	34.5 (8.73)	7	34.8 (9.40)	5
East Midlands	8.81 (5.34)	9	34.6 (20.1)	9	32.3 (6.85)	4
North East	12 (4.40)	5	35.4 (18.6)	5	31.6 (3.17)	3
North West	9.77 (9.38)	14	21.6 (21.3)	13	29.5 (14.0)	7
Northern Ireland	4.54 (4.10)	2	15.9 (8.10)	2	25.0 (7.48)	2
Scotland	8.23 (8.10)	18	31.9 (13.9)	17	34.1 (6.78)	8
South East	11.4 (9.50)	17	30.2 (21.5)	17	26.7 (10.3)	10
South West	7.94 (4.50)	12	26.1 (19.8)	10	27.6 (12.0)	5
Wales	8.13 (4.50)	8	27.3 (18.6)	8	21.8 (2.70)	3
West Midlands	8.73 (7.58)	12	29.2 (23.7)	12	32.4 (4.82)	5
Yorkshire	9.33 (5.90)	10	27.7 (19.8)	10	30.4 (7.91)	5
Measures of association						
η	0.291 (n.s.)		0.225 (n.s.)		0.451 (n.s.)	
$\eta^2$	0.085 (n.s.)		0.05 (n.s.)		0.231 (n.s.)	

**Table 5.14.** Mean percentages and standard deviations (in parentheses) of non-EU international students across HEIs' NUTS1 regions and measures of association between percentages of non-EU international students and HEIs' NUTS1 regions. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Similar results are found when looking at the relationship between percentages of non-EU international students and the variable *HoC classification*, although with some qualifications. Figure 5.12 shows boxplots displaying the distribution of percentages of non-EU international students across HEIs classified by different types of settlement. Again, the 13 HEIs with a satellite campus in London do not appear as being located in 'Core City (London)', but in the type of settlement their home campus is located at.



Figure 5.12. Percentages of first-degree, PGT and PGR non-EU international students by HEIs across House of Commons classification of settlements

Means and SD	First degree	N of HEIs	PGT	N of HEIs	PGR	N of HEIs
Core City (London)	14.0 (10.1)	31	32.7 (15.5)	32	38.9 (11.4)	8
Core City (outside London)	9.65 (6.74)	37	33.8 (17.8)	35	30.9 (8.15)	19
Other City	9.57 (5.79)	27	29.1 (19.1)	26	31.6 (8.37)	12
Large Town	6.98 (5.26)	29	25.3 (19.8)	26	27.9 (11.7)	15
Medium Town	7.61 (5.38)	10	26.3 (22.3)	10	25.6 (9.06)	3
Small Town	12.9 (15.2)	8	21.6 (15.7)	7	29.0 (12.8)	3
Village or Small Community	13.3 (7.29)	5	32.8 (16.9)	6	32.5 (4.26)	5
Measures of association						
η	0.318*		0.207 (n.s.)		0.351 (n.s.)	
$\eta^2$	0.101*		0.043 (n.s.)		0.123 (n.s.)	

**Table 5.15.** Mean percentages and standard deviations (in parentheses) of non-EU international students across HEIs' House of Commons classification of settlements and measures of association between percentages of non-EU international students and HEIs' House of Commons classification of settlements. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

In the case of the variable *HoC classification*, we observe that the differences in mean percentages of non-EU international students across types of settlement are higher than in the variables *NUTS1*, with London again showing, on average, higher values than other types of settlements. This relationship appears to be more significant at first degree level than at PGT and PGR levels, as shown by their  $\eta^2$  values. It is also surprising that HEIs locate at a 'Village or Small Community' appear to be rather successful at recruiting high shares of non-EU international students. This is due to the fact that some of the universities located in this type of settlement are all pre-1992 –Cranfield University, Keele University, The University of Essex, the University of Lancaster and the University of Sussex–, with the exception of one post-1992 university: Harper Adams.

Actors working in the provision of UK higher education to international students work on the basis that London has a special appeal to them, as reviewed in Chapter 3 and in previous sections of this chapter. As an example of the latter, the agency Study in the UK (SI-UK), a consulting company targeting prospective international students endorsed by UK universities and the British council, highlight the distance in time to London in all their university profiles (for an example, see the profile page for Keele University, SI-UK 2018). Therefore, in the following lines, I look at the relationship between the distance in minutes of each HEIs corresponding address and London's King's Cross station and their percentage of first-year non-EU international students. Figure 5.13 shows scatterplots displaying the relationship between the latter two variables for first degree, PGT and PGR levels of study. Table 5.16 shows the measures of association between the two variables.

In figure 5.13 we observe that, although with not a high level of linearity, there appears to be a negative relationship between the percentage of non-EU internationals students, meaning that the further away from London a university is, its share of non-EU international students tends to diminish. According to table 5.16, this relationship appears to be stronger at first degree level, with *minutes to KX* explaining 7 percent (p-value<0.01) of the variation in HEIs' percentages of non-EU international students. R-squared for PGT students is 0.04 (p-value<0.05), and 0.01 (not significant) for PGR students. In conclusion, this relationship, although significant at first degree and PGT levels, does not appear to be very strong.



Figure 5.13. Correlation between percentages of non-EU international students and HEIs' distance in minutes to London's King's Cross for all levels of study –first degree, PGT, PGR.

Correlation coefficients	First degree	PGT	PGR
N of HEIs	147	142	65
Pearson's r	-0.256**	-0.190*	-0.120 (n.s.)
R-squared	0.07**	0.04*	0.01 (n.s.)

**Table 5.16.** Pearson's *r* and R-squared for the relationship between the percentages of non-EU international students and HEIs' distance to London's King's Cross. Also, number of HEIs for each level of study included in the analysis. Significance levels: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

## 3.5. Strategies

As explained at the beginning of this section, I will now look at the relationship between percentages of non-EU international students and variables that may capture the strategies HEIs may follow to increase their appeal to non-EU international students. First, I look at the relationship between shares of non-EU international students and whether HEIs located outside London have set up a satellite campus in the capital. To do so, I have excluded from this particular section of the analysis those universities that have their home campus in London (N=36). Figure 5.14 displays boxplots showing the distribution of percentages of non-EU international students across HEIs classified by whether they had, in 2016, a satellite campus in London for first degree, PGT and PGR levels of study. Table 5.17 displays the mean percentages of non-EU international students across the categories of the variable *Campus in London*.

There are two main things to highlight from both figure 5.14 and table 5.17. First, that it seems that having a satellite campus in London may affect a HEIs' capacity to have larger shares of non-EU international students, particularly at PGT and PGR levels. However, there is also extraordinary variation in the shares of non-EU international students of those HEIs with a satellite campus in London.



**Figure 5.14.** Percentages of first-degree, PGT and PGR non-EU international students by HEIs not based in London across whether they have a satellite campus in London.

Means and SD	First degree	N of HEIs	PGT	N of HEIs	PGR	N of HEIs
Yes	10.5 (9.0)	13	36.3 (22.2)	13	32.8 (7.9)	8
No	9.0 (6.8)	103	28.2 (18.3)	97	39.6 (9.3)	19
Measures of association						
η	0.069 (n.s.)		0.139 (n.s.)		0.120 (n.s.)	
$\eta^2$	0.005 (n.s.)		0.019 (n.s.)		0.014 (n.s.)	

**Table 5.17.** Mean percentages and standard deviations (in parentheses) of non-EU international students across HEIs' not based in London by whether they have a satellite campus in London and measures of association. Also, number of HEIs for each level of study included in the analysis. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

It is remarkable to see how certain universities with a satellite campus in London manage to recruit very small shares of non-EU international students. For instance, at PGT level, non-EU international students at the University of Cumbria represented only 1 percent of their student body. In the case of the University of Wales Trinity Saint David and Ulster University, this figure was around 10 percent. These findings suggest that this strategy may also interact with university prestige. For instance, again at the PGT level, those universities with a satellite a campus in London that recruited a higher share of non-EU international students were either Russell Group –the University of Warwick (62 percent), the University of Liverpool (58) and Newcastle University (49 percent)– or pre-1992 –Loughborough University (66 percent). There was one exception: Coventry University (66 percent), a post-1992 university that has been proven very successful in the past in recruiting non-EU international students.

Second, as identified in Findlay et al. (2017), the offering of certain subjects by universities, particularly the ones that are appealing to an international market, can be thought as a strategy to increase recruitment of non-EU international students. To test whether this is reflected in recruitment data, I have explored the relationship between shares of non-EU international students and the proportion of non-EU international students seeking a degree in the category Law, Economics and Management (Purcell et al. 2009). Figure 5.15 shows scatterplot displaying this relationship across first degree, PGT and PGR levels of study. Table 5.18 shows the measures of association for this relationship.

It is clear, from figure 5.15 and table 5.18, that this relationship only exists at PGT level but with low levels of linearity. At PGT level, 5 percent of variation in the percentages of non-EU international students across HEIs is explained by the percentage of non-EU students taking a LEM degree.



Figure 5.15. Correlation between percentages of non-EU international students and proportions of non-EU students undertaking a degree in LEM for all levels of study – first degree, PGT, PGR.

Correlation coefficients	First degree	PGT	PGR
N of HEIs	147	142	65
Pearson's r	0.00 (n.s.)	0.221**	0.031 (n.s.)
R-squared	0.00 (n.s.)	0.05**	0.00 (n.s.)

**Table 5.18.** Pearson's *r* and R-squared for the relationship between the percentages of non-EU international students and proportion of non-EU students undertaking a LEM degree. Also, number of HEIs for each level of study included in the analysis. Significance levels: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Finally, the last variable that use to measure a potential strategy HEIs may use to recruit more non-EU international students is the diversity of their non-EU student body in terms of their countries of origin, done under the assumption that some HEIs focus on a narrow range of countries to increase their recruitment. In this case, I have excluded those HEIs with less than 10 FTE non-EU students, to avoid Simpson's D values to be too erratic in institutions with really small numbers of non-EU students. In the following section, where I fit a selection of this variables included in this section of the chapter into an OLS regression model, I give the mean Simpson's D sample value to those institutions with less than 10 FTE first-year non-EU international students.

Figure 5.16 display scatterplots showing the relationship between percentages of non-EU international students and HEIs' Simpson's *D*. Table 5.19 shows the measure of association between these two variables. Again, as in the relationship between percentages of non-EU international students and non-EU students undertaking a LEM degree, the relationship between the former variable and HEIs Simpson's *D* seem to be stronger at the PGT level. As shown in table 5.19, 25 percent of the variation of the percentages of non-EU international students is explained by the diversity of their student body. This relationship is negative, meaning that those institutions with less diverse student bodies appear to have higher rates of non-EU international students. This relationship for first degree and PGR students is not statistically significant, as shown in table 5.19.


Figure 5.16. Correlation between percentages of non-EU international students and HEIs' Simpson's D for all levels of study –first degree, PGT, PGR.

Correlation coefficients	First degree	PGT	PGR
N of HEIs	137	131	64
Pearson's r	-0.023 (n.s.)	-0.495***	-0.114 (n.s.)
R-squared	0.001 (n.s.)	0.245***	0.013 (n.s.)

**Table 5.19.** Pearson's *r* and R-squared for the relationship between the percentages of non-EU international students and HEIs Simpson's *D*. Also, number of HEIs for each level of study included in the analysis. Significance levels: not significant (n.s.), \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

### 4. HEIs position and position-taking in the field of higher education

As explained in chapter 3, the way UK higher education institutions exist and behave, particularly in regard to the recruitment of non-EU international students, fits Bourdieu's concept of "field of power" (Bourdieu 1993). UK universities participate in a space in which they compete for resources yielding power and prestige -inter alia, non-EU international students- and where principles of hierarchisisation shape the way these institutions compete and the rewards they gain from this competition 'game' (ibid.: 8). This process by which HEIs exist and interact is powerfully explained using the concepts of 'position' and 'position-taking' (Marginson 2008). UK universities have specific positions within the field, in terms of their location within UK national hierarchies and their interaction with global institutional hierarchies, which shape the 'position-taking' strategies they take in order to compete for non-EU international students (ibid.: 307). Thus, this section seeks to explore whether there are significant differences between different institutional types -in terms of hierarchical configurations- and the proxy measures I have explained above seeking to capture the strategies they pursue in order to make their provision more attractive to non-EU international students. To do so, I compare how these proxy measures vary across institutions using the variable HEI type. As explained in chapter 4 "Data and methods", this variable is particularly useful because it captures, qualitatively, the participation of a handful of institutions in a global elite of universities -the Golden Triangle- and different tiers of nationallybounded hierarchies. It is important to remark that this section does not intend to explore whether

these strategies have been effective in terms of increasing individual HEIs' shares of students who are non-EU international. Instead, it explores whether these have differed between different types of institutions in the academic year 2016/17.

First, I look at the characteristics of HEIs that establish a satellite campus in London. Table 5.20 shows this.

HEI type	Main campus in London	Satellite campus in London	No campus in London
Golden Triangle	4 (66.7%)	0 (0%)	2 (33.3%)
Other Russell Group (RG)	1 (5.6%)	3 (16.7%)	14 (77.8%)
Non-RG pre-1992	13 (31%)	3 (7.1%)	26 (61.9%)
Post-1992	18 (20.7%)	7 (8.0%)	62 (71.3%)

**Table 5.20.** Institutions at each *HEI type* with their main campus in London, a satellite campus in London and without a campus in London. The percentages of HEIs in each type and for each column are shown within brackets.

First, what we observe in table 5.20 is that the majority of institutions that have a satellite campus in London are post-1992 institutions –7 out 13. However, this largely reflects the fact that there are more post-1992 universities than pre-1992 universities, 62 in total compared to 42 across the three sub-sets of pre-1992 universities distinguished in the table above. Considering the question in relative terms, however, non-Golden Triangle Russell Group HEIs are more likely than any other category of HEI to have a satellite campus in London –16.7 percent of these universities had a satellite campus in London. The greater tendency of non-Golden Triangle Russell Group universities to open satellite campuses in London is perhaps unsurprising when it is noted that only one of the eighteen universities of this type has its main campus in London (5.6%), a much lower rate than is the case for the other three university types.

Second, I look at how much the provision of higher education to non-EU international students in high-demand subjects -here operationalised as "LEM" subjects (cf. Purcell et al.

2009)- varies across institutional types. Table 5.21 shows the mean percentages of non-EU international students undertaking a degree in LEM subjects across institutional types across first degree, PGT and PGR levels of study.

HEI type	First degree	PGT	PGR
Golden Triangle	21.6 (15.0)	36.3 (14.0)	7.1 (4.5)
Other Russell Group (RG)	38.8 (12.3)	50.4 (17.1)	11.8 (5.3)
Non-RG pre-1992	41.0 (22.3)	45.3 (24.1)	19.7 (9.8)
Post-1992	36.0 (25.8)	38.8 (27.3)	24.2 (16.9)
Measures of association			
η	0.164 (n.s.)	0.173 (n.s.)	0.475 ***
$\eta^2$	0.027 (n.s.)	0.030 (n.s)	0.226***

**Table 5.21.** Mean percentages and standard deviations (in parentheses) of HEIs' percentages of non-EU international students undertaking a degree in LEM subjects. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

In table 5.21, we observe that the mean institutional percentages of non-EU international students undertaking a LEM degree varies across HEI types, although this variation is only statistically significant at the PGR level. At this level, it is remarkable to see how this percentage increases as we go down the prestige hierarchy of HEI types. It is also interesting to observe how Golden Triangle institutions have the lowest percentages of non-EU international students in these high-demand subjects across all levels of study, although these differences are not statistically significant at first degree and PGT levels. This may suggest that these universities, which are 'largely autonomous' (Marginson 2008), 'can typically count on being able to attract international student without having to do much proactively, simply because of the global reach of their world class reputations' (Tannock 2018: 101). It is also interesting to observe, although this relationship it is not significant, how large the mean percentage of non-EU international students taking a course in a LEM subject is among non-Golden Triangle Russell Group HEIs (50.4 percent). This could indicate that non-Golden Triangle Russell Group institutions, while 'prestige-driven at the national level', 'run foreign degrees as a profit-making business' (Marginson 2006: 21).

HEI type	First degree	PGT	PGR
Golden Triangle	0.88 (0.03)	0.84 (0.06)	0.90 (0.04)
Other Russell Group (RG)	0.84 (0.11)	0.59 (0.13)	0.89 (0.05)
Non-RG pre-1992	0.84 (0.11)	0.79 (0.13)	0.93 (0.03)
Post-1992	0.79 (0.14)	0.84 (0.12)	0.92 (0.02)
Measures of association			
η	0.196 (n.s.)	0.551***	0.409*
$\eta^2$	0.038 (n.s.)	0.304***	0.167*

Finally, I look at how the diversity of individual HEIs' non-EU student bodies varies across institutional types. Table 5.22 shows the mean Simpson's *D* scores across HEI types.

**Table 5.22.** Mean percentages and standard deviations (in parentheses) of HEIs' Simpson's *D*. Significance levels of ANOVA *F*-test: not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

We find significant variation at the PGT and the PGR levels, with a particularly high etasquare at the PGT level ( $\eta^2$ =0.304). At this level of study, we observe how non-Golden Triangle Russell Group institutions have particularly low levels of diversity, suggesting that they recruit most of their PGT non-EU international students from a narrower range of countries compared to more prestigious Golden Triangle universities and less prestigious non-RG pre-1992 and post-1992 universities. These findings could reflect two issues. First, it could be the case that non-Golden Triangle Russell Group institutions, which also had, in 2016/17, the highest shares of students who are non-EU international, have been particularly successful at targeted recruitment strategies. Moreover, since they are among the best resourced HEIs in UK higher education (Olive 2017), non-Golden-Triangle Russell Group universities are particularly well-placed to successfully undertake such "position-taking" strategies. This, in turn, fits well with Marginson's argument that there is a segment of research HEIs that, while enjoying high-esteem nationally, may 'run foreign degrees as a profit-making business' (2006: 21). It would not be unreasonable to think that these 'other Russell Group' universities belong to the latter segment and might be less selective with their intake of non-EU international students. Notwithstanding, this argument is necessarily speculative since the vast majority of non-EU international students apply outside the UK's centralised admissions system, UCAS, and therefore accurate estimates on selectivity would only be possible by gathering data from individual institutions themselves. This would be a fruitful avenue for further research.

However, it could also be argued that the reason why this subset of HEIs have particularly low levels of diversity is because they tend to be more appealing to the Chinese market, as shown by Cebolla-Boado and colleagues (2018). In turn, Cebolla-Boado et al. offer a possible explanation of why Golden Triangle institutions may not have these low levels of diversity, as 'highly prestigious institutions are extremely selective and provide only limited opportunities for Chinese students despite the strong appeal of their reputation' (2018: 373).

# 5. Modelling the percentage of non-EU international students in UK higher education institutions

In this section of this chapter, I fit ordinary least squares (OLS) regression models explaining the percentage of students that are non-EU international in UK higher education institutions using a selection of the university-level factors discussed in previous sections. I fit three separate OLS regression models for each level of study –first-degree, PGT and PGR– to explore the explanatory power of these university-level factors across levels of study, as previous research suggest that 'the motivations for and pathways leading into undergraduate and postgraduate studies may differ' (Briggs 2006; in Cebolla-Boado, Hu, and Soysal 2018: 371) and, from the supply-side, degrees at different levels of study are subject to varying degrees of marketisation (Findlay et al. 2017; Marginson 2006).

As in previous sections, the dependent variable is the percentage of first-year students who are from non-EU countries. The explanatory variables included in the model seek to capture the theoretically-informed drivers explained in the previous section. I have used those that, as discussed in the section above, better explain the variation across HEIs in the percentages of students who are non-EU international. First, as a measurement of institutional reputation, I have used the league table positions as produced by the Complete University Guide, which appears to have the highest effect size measure of all the variables used to capture prestige. Second, to capture both theoretical assumptions that HEIs in London are better placed to attract non-EU international students and that the type of settlements HEIs are located –e.g. other major metropolitan areas– affects HEIs' capacity to pull international students, I use the House of Commons classification of local authorities, which differentiate London from other core cities (Pike et al. 2016). To do so, I have created dummy variables with 'core city (London)' as the reference category.

Also, I have included in the model variables that may capture strategies universities pursue to recruit more non-EU international students. First, I have included a variable showing the universities that are not located in London but have a satellite campus in the capital. Second, I use a variable measuring the percentage of non-EU international students in a given institution studying a degree in Law, Economics or Management (LEM), following Purcell and colleagues classification (Purcell et al. 2009). Finally, I use a variable that measures the diversity of the non-EU international student body, Simpson's diversity index (D), which 'gives the probability that any two students randomly selected from a [university] will be from different [countries]' (Juvonen et al. 2018: 1272). For this analysis, I have multiplied Simpson's D by 100, so it is displayed as a percentage and comparability is made easier with the percentage of non-EU international students affecting Simpson's D, I have replaced the Simpson's D value of those HEIs with less than 10 FTE non-EU international students across all levels of study by the sample mean of D. Moreover, as discussed in previous section, I have excluded from the analysis those universities with less than

100 FTE students from all domiciles. The resulting sample is, for first degree, 147 HEIs, 142 at PGT level, and 65 at PGR level.

Table 5.23 presents the results for the OLS regression model predicting the percentage of first-year students that are non-EU international. First, what we observe is that the model has more explanatory power for PGT students, explaining 69 percent of the variation. The findings show that, at the PGT level, there is a large and significant association between HEIs' reputation and percentage of non-EU international students (B= -0.363, p<0.001) when controlling for the other explanatory variables. The latter coefficient means that for a one position decrease of an HEI in The Complete University Guide 2017 table, the percentage of non-EU international students in that HEI is reduced by 0.36 percentage points. The explanatory power of the model reduces when considering first-year first degree and PGR students, explaining 43 percent of the variation for the former and 16 for the latter.

There is also a significant association between certain types of settlements where HEIs are located in and their shares of students that are non-EU international, particularly at the first degree and PGT level. For first degree students, there are significant differences between London and universities located in a core city outside London (B=-6.0, p<0.001), another city (B=-5.5, p<0.01), a large town (B=-7.7, p<0.001), a medium town (-8.3, p<0.001), and a village or a small community (B=-6.3, p<0.01). There is also a difference between those HEIs located in London and a small town, but it does not appear significant (B=-1.7). At the PGT level, HEIs located in London have, on average, higher shares of non-EU international PGT students when controlling for other explanatory variables than those located in a core city outside London (B=-10.6, p<0.01), a small town (B=-15.2, p<0.001) and a village or small community (B=-13.8, p<0.01). At the PGR level, we only observe significant differences between the institutions located in London and a large town (11.1, p<0.05), and a medium town (14.2, p<0.05).

Furthermore, regarding the strategies HEIs may pursue to recruit more non-EU international students, there are mixed results. First, universities with a campus in London appear to have higher shares of non-EU international students, but this relationship is only significant at the PGT level (B=9.6, p<0.01) than those without, when controlling for the rest of explanatory variables.

Second, there is a clear association, at PGT level, and milder, at first degree level between the percentage of non-EU international students and the proportion of non-EU students undertaking a degree in LEM. At first degree, an increase in one unit in *Non-EU LEM*, HEIs' percentage of non-EU international students increases by 0.05 percentage points (p-value<0.05). At the PGT level, this relationship is stronger, with a unit increase in *Non-EU LEM* yielding an increase of 0.13 percent points in HEIs' shares of non-EU international students.

Finally, there is a clear relationship between the diversity of the non-EU international student body in terms of students' countries of origin and HEIs shares of non-EU international students, although only at PGT level. In this case, universities with less diverse bodies have greater shares of non-EU international students (B=-0.20, p<0.001).

	Model 1: First degree	Model 2: PGT	Model 3: PGR
	Coefficient (Sd. Error)	Coefficient (Sd. Error)	Coefficient (Sd. Error)
Complete University Guide 2017	-0.138 (0.02)***	-0.363 (0.03)***	-0.05 (0.05) (n.s)
HoC type of settlement (ref = London)			
Core City (outside London)	-6.0 (1.6)***	-6.4 (2.8)*	-8.3 (4.2) (n.s.)
Other City	-5.5 (1.8)**	-7.3 (3.0)*	-8.4 (4.7) (n.s.)
Large Town	-7.7 (1.7)***	-11.7 (3.0)***	-11.1 (4.4)*
Medium Town	-8.3 (2.4)***	-10.6 (3.9)**	-14.2 (6.8)*
Small Town	-1.7 (2.6) (n.s.)	-15.2 (4.5)***	-9.7 (6.9) (n.s.)
Village or Small Community	-6.3 (3.2)**	-13.8 (4.8)**	-6.8 (5.7) (n.s.)
Campus in London	1.7 (1.9) (n.s.)	9.6 (3.2)**	3.6 (3.9) (n.s.)
% Non-EU in a LEM degree	0.05 (0.03)*	0.130 (0.04)***	0.11 (0.13) (n.s.)
Simpson's D	-0.031 (0.03) (n.s)	-0.201 (0.07)**	-0.08 (0.3) (n.s.)
Constant	16.3 (1.2)***	41.0 (2.1)***	39.0 (4.5)***
$\mathbb{R}^2$	0.43	0.69	0.16
N of HEIs	147	142	65

**Table 5.23.** OLS regression models prediction the percentage of students that are non-EU international, first degree, PGT and PGR across UK HEIs (N=99). All continuous variables centred at the grand mean of the sample: thus, the constant shows the percentage of non-EU international students in a hypothetical HEI with all predictors taking their grand means of the whole sample and the reference categories 'Core City (London)' and 'No campus in London' in the categorical variables 'HoC type of settlement' and 'Campus in London' respectively. Not significant (n.s.), \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

## 6. Conclusion

In this chapter, I have tried to test whether certain characteristics of institutions and a set of variables trying to capture strategies they may pursue to recruit more non-EU international students, as identified in the literature in chapter 3, have an effect in HEIs' shares of non-EU international students. These variables have allowed me to provide a synthesis of what makes UK universities successful in recruiting non-EU international students once size is factored in. However, as with any other exercise trying to survey 'a complex terrain, any synthesis is partial' (Marginson 2006: 2). I have also looked at whether the latter strategies vary across institutional types in terms of their hierarchical position in UK higher education, exploring whether the 'position' of UK universities within the polarised field of higher education shapes their 'position-taking' strategies when competing for non-EU international students (Bourdieu 1993; Marginson 2008).

First, I have shown that there was, in 2016/17, substantial variation in HEIs' shares of students who are non-EU international. In the bivariate analysis section of this chapter, I have reported that this variation could be largely explained by UK institutional hierarchies. The latter relationship is robust, as similar patterns were put forward using different measures of UK institutional hierarchies. This is consistent with the literature reviewed in chapter 3. As suggested by several authors, institutional reputation is one of the main factors impacting prospective mobile students decision to study abroad (Beech 2014; Cebolla-Boado et al. 2018; Findlay et al. 2012; cf. Waters and Brooks 2011). The bivariate analysis also suggests HEIs' geographical location in terms of whether they are located in London, another major metropolitan city and elsewhere partially explains this variation, particularly at the first degree level. The fact that this relationship is not significant at the PGR level is surprising, considering that research mobile students are thought to frame their mobility experience within a broad migration plan (Gaulé and Piacentini 2013), and should be more attracted to the idea of staying in a global city. In terms of strategies, the results displayed in this chapter are mixed. First, we do not observe a significant variation of shares of

students who are non-EU international between those HEIs that have established a satellite campus in London and those who have not. Second, we observe a moderate relationship between HEIs' proportion of non-EU international students undertaking a LEM degree and the dependent variable, but only at the PGT level. Finally, we also only observe a relationship, in this case negative, between HEIs' shares of students who are non-EU international students and the diversity of their non-EU international student body at the PGT level. However, this relationship is relatively strong (R-squared 0.245, p-value <0.001).

Second, I have explored whether the strategies described above vary substantially across types of institutions in terms of their hierarchical position in the field of higher education. This has been done in order to explore whether the scale and the shape of recruitment of non-EU international students in UK higher education can be explained through HEIs' positions within the field of higher education. Interestingly, I have shown that non-Golden Triangle Russell Group universities are both more likely to have a satellite campus in London –although the majority of satellite campus in London are from post-1992 HEIs– and have substantially less diverse student bodies at the PGT level, as shown in table 5.22. These findings could reflect two issues. First, it can be argued that indeed non-Golden Triangle Russell Group institutions, which also had, in 2016/17, the highest shares of students who are non-EU international, have been particularly successful at targeted recruitment strategies. Also, they are among the best resourced HEIs in UK higher education (Olive 2017), which could mean that they already have a competitive "position" to undertake their "position-taking" strategies. This, in turn, fits well with Marginson's argument that there is a segment of research HEIs that, while enjoying high-esteem nationally, may 'run foreign degrees as a profit-making business' (2006: 21).

Finally, this chapter has develop an OLS regression model predicting HEIs' shares of students who are non-EU international taking into account a selection of the variables capturing all the predicted drivers identified in chapter 3. As indicated in section five of this chapter, the model appears to provide a good explanation of what is going on regarding the recruitment of no-EU international students in UK higher education particularly at the PGT level, known for having been subject for several years to high levels of marketisation (Brown and Carasso 2013; Findlay et al. 2017). I have shown that, at the first degree level, the size of HEIs' provision in high-demand subject and HEIs' geographical location do contribute to explaining variation in the dependent variable when the other variables are accounted for. Interestingly, diverging slightly from the results shown in the bivariate analysis, all the predicted drivers have a net effect in explaining variation in the dependent variable at the PGT level. These predicted drivers are not significant at the PGR level. Thus, I argue that the relevance of institutional characteristics together with measures that seek to capture the strategy they may pursue in the context of competition for non-EU international students appear to be starker when the provision and outcomes of given system are governed by market or quasi-market mechanisms. This is consistent with previous research that states that marketization brings about 'the creation, or more likely, the intensification of stratification, both of the institutions and of the socio-economic constituencies they serve' (R. Brown and Carasso 2013; 124).

The issue above probably explains why institutional reputation appears to be one of the better predictors of the share of non-EU international students in a given institution, as shown both in this chapter's bivariate analysis and model. Universities regarded as 'better', which already enjoy higher levels of symbolic, economic, cultural and social capital, are able to better capitalise the resources fought over in the competition for the fees of non-EU international students, in a very similar way individuals and their ascribed characteristics shape their chances in a context of global and national positional competition (Brown 2000). In this sense, this supports Marginson's theory that higher education resembles the Bourdieusian concept of 'field of power', where universities act in a 'space of possibles' shaped by their position within the field of power, which in turn affects their position-taking activities in order to compete within this field (Bourdieu 1993; Marginson 2008). This in turn, resembles how society works in political milieus where meritocracy is thought to be the most 'just' mechanism for distributing resources (Mateos-González and Boliver 2019).

International students in UK HEIs: prosperity, stagnation and institutional hierarchies 1995/96 – 2016/17

## 1. Introduction

Over the last quarter of a century, the number of non-European international students crossing the UK border to pursue a degree at a UK university has grown significantly. However, this growth has been non-linear and non-monotonic. The analysis presented in chapter 2 suggests that, between the late 1990s and 2003, the numbers of non-EU international students entering UK higher education grew exponentially. This was followed by a period of plateau that lasted until 2007, when numbers took off again until 2010/11, coinciding with the election of the Conservative-led coalition government. Since then, 'the number of international students has remained broadly flat (HM Government 2013: 20), making the UK 'no longer the unchallenged number two country after the United States' (Marginson 2018: 6) in terms of its global market share. These trends were evident for both the absolute numbers of non-EU international students and their share of all students. This, in turn, could be due to the fact that these two levels of study are more heteronomous to market dynamics than is the case for postgraduate research programmes (Findlay et al. 2017; Marginson 2006).

As reviewed in chapter 2, this period of prosperity –using the language of the former Department for Business, Innovation and Skills (HM Government 2013)– followed by stagnation has been caused by a myriad of factors, both global and UK-bounded. While it is impossible to single out a determinant for the shape of this growth curve, many commentators argue that the recent plateauing of non-EU international student numbers can be attributed to a shift in migration policies brought about since the election of the 2010 Coalition government (Levatino et al. 2018; Marginson 2018a; Willetts 2017). 'Policy pressure to reduce net annual migration, which includes students on temporary visas' (Marginson 2018b: 33) have contributed to creating the conditions for stagnation. Notwithstanding, to my knowledge, there is no systematic research on how, in the last 25 years, the distribution of non-EU international students has varied across the sector considering these periods of both abundant growth and stagnation. This chapter endeavours to address this gap. To do so, I draw on a longitudinal analysis of data for the period from 1995/96 and 2016/17, addressing the following research questions:

- To what extent was the growth experienced in the periods between 1999 and 2003, and 2007 and 2010 of non-EU-international students unevenly distributed across UK HEIs?
- 2) To what extent was the stagnation experienced in the periods between 2003 and 2007, and since 2010 of non-EU international students unevenly distributed across UK HEIs?
- 3) What explains this uneven distribution?

In section two, I consider the degree to which the percentage of students who are non-EUinternational varies, over time, across UK higher education institutions, which represents the explanandum of this chapter. Again, the reason why I look at percentages of students who are non-EU international when looking at UK HEIs specifically is that, as shown in chapter 5, absolute numbers of non-EU international students appears to be largely a function of institutional size as measured in total enrolments. In this sense, looking at percentages of students who are non-EU international allows me to factor institutional size into my analysis. First, I provide a basic description of the distribution of first-year non-EU international students, both in FTE counts of students and percentages, across HEIs. Second, I show that institutional variation of the percentage of students who are non-EU-international, as measured by the standard deviation and the interquartile range, has increased over the period at stake, but at different paces at different stages and with a highly erratic pattern at the PGR level. This, I demonstrate, indicates that although many institutions benefitted from this period of overall growth rather than just a limited few, some institutions benefitted more than others. Interestingly, I show that, at first degree and PGT levels, which are more heteronomous to market dynamics, standard deviation increased particularly at the beginning of the expansionary period, between 1999/2000 and 2003/04. This was followed by a period of moderate growth at the PGT level and plateauing at the first degree level. This suggests that the stark differences between HEIs in terms of their shares of non-EU international students became clear at the beginning of the period.

In section three, I turn to consider the subjects non-EU international students enrol to and the countries they come from and how this distribution has evolved over time, referring to the policy phases described in chapter 2. I show that Asia has increasingly become the predominant source continent, particularly at the PGT level, but with some qualifications. In this sense, the numbers of Chinese students have continued to grow exponentially, even after the election, in the 2010, of the Conservative-led coalition government which sought to tighten student visa requirements. Indian students, however, show completely opposite patterns. While their numbers grew between 1995/96 and 2010/11, they display a substantial decline after the Coalition government came to power in 2010. In terms of subjects of study, I show how, over the last two decades, the importance of business-related disciplines have increased considerably across all levels of study.

Section four begins to unpack the drivers of these trends over time, building on the findings put forward in chapter 5. Using descriptive and bivariate statistics, I test the hypothesis that the likelihood of an institution reaping a larger share of the growth of non-EU-international students during the two periods of rapid growth nationally is greater if they 1) are higher prestige institutions 2) are located in the capital or another major metropolitan area, 3) recruit students to a less diverse range of subject areas, 4) recruit students from a less diverse range of countries of origin. I also test the related hypothesis that, during periods of plateau at the national level, the four attributes listed above also predict whether institutions will experience continued growth in the percentage of students who are non-EU-international, albeit at a more modest rate than before, instead of a levelling off or even a decline.

Finally, section five develops this descriptive and bivariate analysis by building a series of multiple ordinary least squares (OLS) models with linear splines, which allows to estimate the relationship between the dependent variable –HEIs' share of non-EU international students– and the explanatory variables as a piecewise linear function, creating different slopes coinciding with different periods of growth and stagnation (StataCorp 2017). I provide further details about this method in chapter 5, where I discuss this thesis' methods.

## 2. Non-EU international students in UK higher education from 1995/96 to 2016/17: analysis by institution

This chapter aims at identifying what institutional characteristics and the strategies they may pursue in order to make their provision more attractive to non-EU international students explain the unevenness between institutions in their shares of non-EU international students over time. Particularly, I am looking at how the explanatory power of the drivers that I identified in chapter 5 for the academic year 2016/17 varies for the period under study, seeking to detect which kinds of HEIs have enjoyed more growth or suffered more stagnation at the different policy phases described in chapter 2. However, before I delve into researching this unevenness, this section provides a basic overview of how the provision of higher education to non-EU international students has been distributed across HEIs between 1995/96 and 2016/17. Second, I show that institutional variation of the percentage of students who are non-EU-international, as measured by the standard deviation and the interquartile range, has increased over the period at stake, but at different paces at different stages and with a highly erratic pattern at the PGR level.

#### 2.1. Which HEIs recruit the most non-EU international students? A descriptive analysis since 1995/96

As explained in section 3 of chapter 5, the distribution of non-EU internationals students across UK higher education institutions was, in 2016/17, highly uneven. I also stated that the uneven distribution of absolute numbers of non-EU international students could be explained by HEIs' overall size -in terms of total enrolments-, particularly at the PGT level. However, this unevenness remained when looking at the percentages of students who are non-EU international, factoring in institutional size. In this subsection I explore how this unevenness has evolved over time, describing which HEIs have recruited more non-EU international students -both in absolute and relative terms- across first degree, PGT and PGR levels of study. To do so, I chart the numbers of first-year non-EU international students across UK HEIs, exploring the top 10 HEIs that recruited the most non-EU international students at the beginning period under study -1995/96- and at the end of each policy phase identified in chapter 2: at the end of the diagnosis phase in 1999/2000, the expansionary period of the first Prime Minister's initiative in 2003/04, the first plateau period in 2007/08, the second Prime Minister's initiative in 2010/11 and the 2010 Coalition and 2015 Conservative governments' policies in 2016/17. Table 6.1 show the top 10 recruiting institutions, in absolute terms, for the latter periods. Table 6.2 displays the shares of students who are non-EU international. As in chapter 5, the institutions with less that 100 FTE total students have been excluded from the analysis.

1995/96 1999/2000		2003/04		2007/08		2010/11		2016/17			
First degree											
HEI	Non-EU	HEI	Non-EU	HEI	Non-EU	HEI	Non-EU	HEI	Non-EU	HEI	Non-EU
Wolverhampton	660	Manchester	560	Manchester	920	Manchester	1,065	Manchester	1,450	Coventry	2,150
Manchester	660	Northumbria	470	Hertfordshire	830	Northumbria	920	UCL	1,060	Liverpool	2,005
De Montfort	475	Middlesex	470	Nottingham	775	Arts London	785	Nottingham	1,015	Manchester	1,835
Hertfordshire	465	Nottingham	465	Northumbria	770	Nottingham	750	Coventry	975	UCL	1,515
Coventry	460	Arts London	410	Portsmouth	720	UCL	695	Northumbria	965	Arts London	1,375
East London	450	LSE	390	London Met	695	Warwick	615	Central Lancs	955	Nottingham	1,100
Portsmouth	390	Portsmouth	320	Middlesex	680	Imperial	565	Hertfordshire	950	De Montfort	1,080
Middlesex	385	London Met	320	Arts London	675	London Met	555	Arts London	920	Edinburgh	1,050
West London	375	Oxford Brookes	315	UCL	595	Hertfordshire	540	Portsmouth	905	King's College	1,025
UCL	370	Westminster	305	Leeds Beckett	575	Greenwich	520	Sunderland	880	Sheffield	1,015
PGT											
Manchester	870	LSE	1170	LSE	1630	LSE	2,015	Manchester	2,185	UCL	3,420
LSE	780	Manchester	720	Manchester	1465	Manchester	1,650	LSE	2,045	Manchester	3,210
Warwick	730	UCL	695	Leeds	1305	Cardiff	1,160	UCL	1,620	Glasgow	2,500
Birmingham	635	Warwick	620	UCL	1170	City University	1,100	Bedfordshire	1,545	Leeds	2,495
UCL	585	Birmingham	610	Birmingham	1100	UCL	1,020	Leeds	1,510	LSE	2,420
Hull	585	Leeds	570	Nottingham	1065	Greenwich	1,010	Warwick	1,495	Edinburgh	2,335
Imperial	480	Cardiff	545	Warwick	995	Warwick	1,005	Newcastle	1,495	Warwick	2,235
Leeds	450	Nottingham	450	City University	915	Nottingham	1,000	Edinburgh	1,470	Birmingham	2,195
Strathclyde	385	Strathclyde	400	London Met	850	Leeds	955	Cardiff	1,445	King's College	1,960
Reading	380	Oxford	400	Oxford	825	Oxford	940	Sheffield	1,440	Sheffield	1,945

PGR											
Cambridge	605	Cambridge	670	Cambridge	740	Cambridge	755	Cambridge	805	Cambridge	700
Manchester	365	Manchester	305	Oxford	425	Manchester	440	Oxford	440	Oxford	425
Oxford	280	Oxford	300	Manchester	370	Oxford	340	Manchester	330	Manchester	395
Sheffield	180	Birmingham	195	Nottingham	275	Nottingham	335	Edinburgh	305	UCL	380
Imperial	165	Nottingham	170	Edinburgh	235	Edinburgh	270	UCL	260	Edinburgh	360
UCL	160	UCL	145	UCL	215	Sheffield	240	Nottingham	245	Imperial	355
Newcastle	145	Leeds	145	Sheffield	210	UCL	230	Southampton	235	Sheffield	245
Edinburgh	140	Imperial	135	Birmingham	210	Leeds	195	Sheffield	225	Nottingham	230
Birmingham	115	Southampton	130	Newcastle	205	Imperial	195	Imperial	215	Liverpool	230
Liverpool	100	Sheffield	120	Leeds	180	Newcastle	185	Leeds	190	Leeds	220

**Table 6.1.** Top 10 recruiting HEIs of first-year non-EU international students –in absolute numbers– across first degree, PGT and PGR levels of study in 1995/96 and at the end of each policy period identified in chapter 2.

1995/96	995/96 19		1999/2000		2003/04		2007/08		2010/11		2016/17	
First degree												
LSE	29.20%	LSE	36.24%	LSE	37.70%	Buckingham	58.10%	Buckingham	49.60%	LSE	40.72%	
Royal Coll Mus	16.67%	Royal Vet Coll	18.32%	Imperial	26.00%	LSE	37.41%	LSE	37.06%	Buckingham	40.24%	
Imperial	16.30%	Arts London	16.62%	Bedfordshire	22.46%	Imperial	24.90%	Imperial	27.70%	St Andrews	31.92%	
Royal Vet Coll	15.72%	Royal Coll Mus	15.86%	Arts London	21.78%	Arts London	23.08%	Arts London	26.34%	Imperial	31.53%	
West London	14.97%	Imperial	13.67%	Royal Coll Mus	20.18%	St Andrews	20.55%	UCL	25.98%	Arts London	30.40%	
East London	13.62%	Nottingham	12.05%	Royal Ac Music	19.23%	UCL	18.69%	St Andrews	25.73%	UCL	28.94%	
Wolverhampton	12.56%	City University	11.58%	City University	17.82%	Glasgow Art	18.48%	Sunderland	23.50%	Liverpool	26.99%	
Surrey	12.46%	Essex	10.16%	UC Birmingham	16.88%	Warwick	16.60%	City University	20.09%	Coventry	25.58%	
Arts London	12.36%	Oxford Brookes	10.15%	Middlesex	16.86%	Aston	16.39%	Warwick	19.87%	Royal Coll Mus	23.53%	
Hertfordshire	11.76%	Trinity Laban	10.15%	UCL	16.34%	City University	16.29%	Royal Coll Mus	19.58%	Royal Vet Coll	22.65%	
PGT												
L'don Business	48.33%	L'don Business	49.36%	UC Birmingham	73.48%	Abertay	74.89%	Bedfordshire	77.02%	Coventry	66.03%	
LSE	46.72%	LSE	47.15%	LSE	58.84%	UC Birmingham	66.94%	UC Birmingham	74.79%	Loughborough	65.01%	
Hull	45.73%	Bedfordshire	40.80%	Bedfordshire	58.47%	Aston	64.24%	Coventry	68.27%	Southampton	62.07%	
Essex	41.56%	Sch of Hygiene	39.60%	Loughborough	56.97%	Robert Gordon	60.65%	Glyndŵr	67.28%	Leeds	61.78%	
SOAS	41.10%	Warwick	35.85%	Bradford	55.43%	Greenwich	60.55%	Aston	65.30%	Warwick	61.56%	
Sch of Hygiene	38.78%	Oxford	35.74%	Essex	55.02%	LSE	59.64%	Liverpool	63.10%	Manchester	61.35%	
Coventry	35.58%	SOAS	35.45%	L'don Business	53.74%	Loughborough	58.03%	Greenwich	61.21%	Surrey	59.33%	
Bradford	35.33%	Essex	35.36%	Abertay	51.71%	Stirling	56.67%	St Andrews	60.66%	LSE	58.63%	
Warwick	33.72%	Bradford	33.77%	Hertfordshire	50.36%	Coventry	56.60%	Robert Gordon	59.79%	Liverpool	58.01%	
Royal Coll Mus	33.33%	Royal Ac Music	31.37%	Creative Arts	47.66%	St Andrews	56.37%	Stirling	59.61%	Durham	57.68%	

PGR											
Essex	42.07%	SOAS	44.69%	Bradford	55.19%	Bradford	62.20%	De Montfort	60.16%	Brunel	53.62%
SOAS	41.62%	Essex	43.37%	SOAS	53.84%	Heriot-Watt	52.77%	Brunel	50.30%	SOAS	53.41%
Cambridge	38.39%	Cambridge	37.24%	Heriot-Watt	48.24%	Brunel	52.69%	Heriot-Watt	48.60%	Salford	50.19%
Bradford	37.42%	Bradford	34.83%	Essex	45.38%	Essex	50.97%	Essex	47.31%	Bournemouth	45.88%
LSE	36.86%	Loughborough	34.60%	Loughborough	44.29%	SOAS	50.64%	SOAS	45.19%	Anglia Ruskin	45.84%
Newcastle	31.77%	Oxford	34.32%	Queen Mary	42.77%	Leicester	50.00%	Dundee	44.42%	Aberdeen	42.77%
Oxford	30.95%	De Montfort	34.29%	Nottingham	41.53%	Salford	49.52%	Huddersfield	41.72%	LSE	42.62%
Durham	30.18%	Aston	34.03%	Brunel	40.62%	Loughborough	46.05%	Cranfield	40.44%	Leicester	42.37%
Exeter	28.40%	Nottingham	33.23%	Oxford	40.44%	Sheffield	45.43%	Oxford	39.64%	St Andrews	41.79%
Sussex	28.35%	Manchester	32.41%	Bath	39.19%	LSE	43.51%	Cambridge	39.14%	Manchester	41.67%

**Table 6.2.** Top 10 recruiting HEIs of first-year non-EU international students –in relative terms– across first degree, PGT and PGR levels of study in 1995/96 and at the end of each policy period identified in chapter 2.

The first feature to highlight in table 6.1 is the high degree of variability in the numbers of first-year non-EU international students for the HEIs that make it to the top 10 throughout the period at stake. For first degree students, there is only one university that consistently appeared in the top 10, Manchester, which was also the major recruiter in all the years shown in table 6.1 but in 1995/96 and 2016/17. There is also a remarkable fact: in 1995/96, 8 out of the top 10 recruiters were post-1992 HEIs, a picture that is inverted in 2016/17, when 7 out of the 10 top recruiters were "old" institutions belonging to the Russell Group. It appears that, over time, this feature became more prominent, with more "old" institutions taking the lead. Notwithstanding, it is also important to note how, in certain periods, some HEIs suddenly make it to the top 10, such as Sunderland in 2010/11, and De Montfort in 2016, which only appeared in the top 10 in 1995/96. This high degree of variability over time can also be observed when looking at the percentages of students who are non-EU international, as shown in table 6.2. Again, at first degree level, we observe that there are only two HEIs that consistently make it to the top 10 across all years: the London School of Economics (LSE) and Imperial. In the case of the LSE, it has been the HEI with the highest share of non-EU international students across all years, with the exception of 2007/08 and 2010/11, which came second after the private University of Buckingham. Again, as in table 6.1, in 1995/96, the top 10 HEIs with the highest shares of non-EU international students consisted of a combination of "new" and "old". In that year, the University of West London, East London, Wolverhampton and Hertfordshire made it into the top 10. However, by 2016/17, Coventry was the only "new" university that made it into the top 10 list. It is also important to highlight that, at the first degree level, there is a significant number of specialist institutions –such as the Royal College of Music, the Royal Academy of Music or the Royal Veterinary College- that appeared among the HEIs that had the highest shares of non-EU international students.

Similar features can be found at the postgraduate taught level. First, there is also a high degree of variability, particularly when looking at the shares of students who are non-EU international. Interestingly, in absolute terms, the universities that recruit the highest numbers of first-year nonEU international students appear to be relatively stable. Throughout the period at stake, "old" HEIs –particularly Russell Group– consistently appear in the top 10 of major recruiters of international students. Nevertheless, "new" universities also make appearances in certain years. For instance, after the second Prime Minister's Initiative period, the University of Bedfordshire managed to recruit 1,545 first-year PGT non-EU international students. However, in 2016/17 it did not make it to the top 10 as it got its licence to recruit non-EU international students suspended by the Home Office (Home Office 2014). Other "new" universities, which did not have their licence suspended, also made it to the table. For instance, in 2007/08, Greenwich was the sixth highest recruiter of first-year PGT non-EU international students (N=1,010). In terms of HEIs' shares of students who are non-EU international, we see that the top 10 major recruiters change substantially over the years. There is a particularly significant change between 2010/11 and 2016/17. In the former academic year, 6 out of 10 HEIs with the highest shares of students who are non-EU international were "new", while in the latter, only one –Coventry– got its university title after 1992.

At the postgraduate research level, the top 10 universities that recruit the most first-year non-EU international students, in absolute terms, are much more stable over time than at first degree and at PGT level. Moreover, across all periods, Cambridge and Oxford consistently appear in the top 3. Other members of the so-called Golden Triangle (Wakeling and Savage 2015), in this case UCL and Imperial, and other members of the Russell Group monopolise the tables throughout the period concerned. This may suggest that the absolute number of non-EU international PGR students are a reflection of HEIs' research capacity, which, in the UK, is concentrated in a handful of "old" universities (Brown and Carasso 2013). However, the picture is considerably different when looking at the percentages of students who are non-EU international. First, table 6.2. does suggest that some "new" universities have managed to have high shares of non-EU international students. While this was not the case in 1995/96, in 1999 there was one "new" universities that made it to the top 10 –De Montfort (34.3 percent). De Montfort did not appear again in the top 10 until 2010, which, together with Huddersfield were the two "new" universities that made it to the top 10 in terms of their shares of first-year PGR non-EU international students. Finally, in 2016/17, Anglia Ruskin and Bournemouth were the two "new" universities that had among the highest shares of non-EU international students. It is also important to highlight the fact that, throughout the whole period, SOAS has been consistently appearing as one of the HEIs with the highest percentages of international students, which could be a reflection of its ties with the Imperial project (Brown 2016).

#### 2.2. The evolution of the variation of non-EU international student numbers across UK HEIs

In this section, I explore how the variation of numbers and percentages of first-year non-EU international students across UK HEIs have evolved in the period under study. Drawing from what I have reviewed in chapter 2, 3 and 4, I hypothesise that variation increases over time, with certain HEIs monopolising a large share of non-EU international entrants. To do so, I calculate the standard deviation and the interquartile range of the distribution of numbers and percentages of students who are non-EU international across UK HEIs for each academic year in my dataset. Again, as in chapter 5, to avoid percentages being sensitive to small changes in counts of students, I exclude HEIs with less than 100 FTE students at each level of study. Also, HEIs that did not have provision at certain levels of study are excluded from that level of study. The standard deviation allows researchers to measure the 'average variability (spread)' of a dataset (Field, 2009: 794). Higher values in the standard deviation means that the dataset is more spread out, suggesting higher variability between HEIs. The interquartile range (IQR) measures 'the limits within which the middle 50% of an ordered set of observations falls' (ibid.: 788). It is calculated by dividing rank-ordered data into four equal quartiles and subtracting the first quartile from the third. Like standard deviation, the IQR is a measure of the dispersion of the data. Figure 6.1. shows the evolution of the standard deviations of the percentages of first-year non-EU international students

across all levels of study. Figure 6.2 shows the evolution of the IQRs of the percentages of firstyear non-EU international students across all levels of study.



Figure 6.1. Standard deviations of the percentages of first-year non-EU international students across all levels of study between the years 1995/96 and 2016/17.



Figure 6.2. IQRs of the percentages of first-year non-EU international students across all levels of study between the years 1995/96 and 2016/17.

As shown in figures 6.1 and 6.2, the spread of the percentages of non-EU international students have been growing over time in the period under study. This suggests that, in the last two decades, HEIs have been diverging in terms of their shares of first-year non-EU international students. This growth appears to be particularly marked from 1999/2000 to 2003/04, coinciding with the first period expansion in my dataset and the implementation of PMI1. In the case of both standard deviations and IQRs, the level of study that has grown the most is PGT, which again, could be a reflection of the fact that it is the level of study that has historically been more subject to marketisation. In the case of first degree students, standard deviation values show that differences between HEIs in their shares of first-year non-EU international students grew during the first period of expansion under the PMI1, only to moderately decline and grow again in subsequent years. At the PGR level, standard deviations and IQRs show more erratic patterns, and an overall moderate growth rate.

## 3. Non-EU international students in UK higher education from 1995/96 to 2016/17: analysis by subject of study and country of origin

As explained in chapter 2, 3 and 6, previous research has identified that students from certain nationalities have been more or less likely to study in the UK depending on policy environments in the UK and elsewhere (MAC 2018; Verbik and Lasanowski 2007). Equally, some authors have provided in the past speculative arguments about the increasing importance over time of certain fields of study, particularly business-related subjects in a context of marketised, demand-driven, higher education systems (Brown et al. 2011; Choudaha 2017). Thus, this section describes this research's dataset to explore how the distribution of students' nationalities and subjects of study have changed over time.

## 3.1. Analysis by country of origin

As suggested in chapter 5, the field of international student mobility to the UK presented highly uneven patterns, with a handful of countries dominating this field. China particularly stood out, with for example almost half of PGT students coming from this country. This is consistent with the literature, which suggests that international student mobility patterns are widely imbalanced (Börjesson 2017) and that marketisation practices have contributed to 'narrowing the range of origin countries from which the main flows international students come' (Findlay et al. 2017: 149). However, what does this picture look like over time? Perraton suggests that since the introduction of full-cost fees for non-EU international students in 1979, the proportion of Commonwealth students have progressively fallen:

'In 1981, students from the Commonwealth made up half of the overseas total, but by 1991 they had fallen to 38 per cent; after this date, in a recognition of political realities, statistics seldom use Commonwealth students as a category but the figures suggest they had dropped to 28 per cent by 2004. The figures also reflect the end of the informal empire so that Egypt, Iraq and Iran no longer appeared among the top eight sending countries' (Perraton 2014: 130-131).

Moreover, Chinese students started to dominate the landscape between the 80s and the second decade of the twenty-first century. In 1981, China only sent 163 students to the UK to study. However, by 2001 there were around 21,000 Chinese students in the sector, a figure that tripled by 2010 (ibid.: 131). In general, Asia has been increasingly dominating the list of sending countries to the UK and by the early 2000s, and in spite of the reduction in the numbers of Commonwealth students, India, Pakistan and Bangladesh still sent a substantial number of students. Notwithstanding, research suggests that this situation started to change, particularly after the election of the Conservative-led coalition government. According to research from the Migration Observatory at the University of Oxford, 'the significant drop in student migration from India is thought to be related to the new student visa introduced by the Home Office from 2010 onwards, which was aimed at reducing abuse of the student route' (Blinder and Fernández-Reino 2018: 4).

The growing importance of Asian countries in sending international students to the UK identified by Perraton (2014) is certainly reflected in the data used in this study. As in chapter 5, I categorise sending countries into 7 continents/world regions: Asia, North America, South America, Africa, Middle East, Australasia and Europe (non-EU). First, figure 6.3 charts the number of first-year Asian students from 1995/96 to 2016/17 for first degree, PGT and PGR levels of study. I have decided to chart the trends from continents/world regions other than Asia separately as the fact that Asia sends such an overwhelming proportion of non-EU international students coming to the UK makes the patterns from other continents/world regions illegible. Figures 6.4, 6.5 and 6.6 chart the trends of first-year students respectively. The policy phases identified in chapter 2 are shown using dashed lines.

In figure 6.3 we observe that the number of first-year Asian students grew phenomenally over the period at stake, particularly at first degree and PGT levels. In 1995/96, there were 11,565 firstyear first degree Asian students, representing 64 percent of total non-EU international students, 8,785 (49 percent) at PGT level, and 2,035 (42 percent) at PGR level. By the end of the period, these figures were 36,855 (68 percent), 54,665 (71 percent), and 3,970 (45 percent) respectively. However, as shown in figure 6.3, this growth has not been linear, nor monotonic. Particularly, we observe a plateauing of numbers during the first plateau phase and during the Coalition migration policy phase. Notwithstanding, PGT numbers appear to have been more sensitive the Coalition policies than first degree ones, although the latter markedly show signs of decline since the academic year 2013/14.



Figure 6.3. Evolution of numbers of first-year Asian students by level of study.



Figure 6.4. Evolution of numbers of first-year first degree non-EU international students by continent/world region other than Asia.



Figure 6.5. Evolution of numbers of first-year PGT non-EU international students by continent/world region other than Asia.



Figure 6.6. Evolution of numbers of first-year PGR non-EU international students by continent/world region other than Asia.

There are other continents/world regions that show similar patterns to Asia. At the first degree level, as shown in figure 6.4, students from Africa, the Middle East and North America also show phenomenal levels of growth. In 1995/96, Africa sent 2,100 first-year first degree students, representing 12 percent of the total, the Middle East sent 1,225 (7 percent), and North America 970 (5 percent). By 2016/17, these continents sent 4,475 (8 percent), 5,138 (9 percent) and 3,650 (7 percent) respectively. Of these three continents/world regions, Africa is the only one that has seen a fall in its share of the total non-EU international students. It also appears to have been more sensitive to the Coalition migration policies. Moreover, both the Middle East and Africa appear to have slowed down the number of students sent to the UK during the first plateau phase. This could also due to a particularly strong pound sterling between 2003/04 and 2007/08 compared to the dollar (Jones and Connington 2019). Notwithstanding, this does not appear to have had an effect on the number of students coming from North America, who show a particularly stable pattern of growth throughout the period. Finally, students coming from Europe -outside the European Union- show a substantial drop between 2003/04 and 2004/05, due to the accession of 10 countries to the European Union in 2004 (Dedman 2009). Moreover, the numbers of non-EU European students decline from 2014/15, which in turn could also be due to a lagged effect of the Coalition migration policies.

At the PGT level, as shown in figure 6.5, patterns are slightly different and appear to be more sensitive to policy phases. This could be due the fact that PGT international education in the UK has been subject to higher marketisation pressures in a 'highly volatile, competitive global market' (Raduntz 2005: 241). First, one feature that stands out from figure 6.5 is the rapid growth and decline observed in the numbers of incoming first-year PGT African students. Between 1999/2000, when the first Prime Minister's Initiative was introduced, and 2009/10, the final year of Gordon Brown's government, numbers grew threefold, from 3,005 to 9,365. However, between 2009/10 and 2016/17, numbers declined significantly, from 9,365 to 5,700. These numbers

suggest that the election of the Coalition government has an immediate effect on the numbers of African students moving to the UK to pursue a higher education degree.

The Coalition government policy phase also appears to have had an impact on the numbers of first-year PGT Middle-Eastern students, While these grew substantially between 1999/2000 to 2010/11 –from 1,405 to 5,070–, they started to decline from the latter year, down to 4,305 in the last year of my dataset.

Moreover, the number of North American students also show signs of slowing down from 2003/04, a period characterised by a particularly strong pound sterling in relation to the US dollar (Jones and Connington 2019). Between 2000/01 and 2003/04, the numbers of first-year PGT North American grew from 3,185 to 5,220, at a rate of 510 students per year. However, between 2003/04 and 2007/08, these grew from 5,220 to 5,395, at a rate of 35 students per year. From 2007/08, coinciding with the implementation of the second Prime Minister's Initiative, numbers of North American students started to grow again, from 5,395 to 7,310 in 2016/17 -at a rate of 190 students per year. It seems that the Coalition government policy phase did not slow down the number of North American students coming to the UK. This could also be due to the fact that North American countries were listed, in 2011, as belonging to a list of countries whose students are considered by the Home Office 'to be a low risk to breaching the Tier 4 Immigration rules' (MAC 2018: 12). This could also be the reason why the numbers of South American and Australasian students did not decline neither (ibid.). Finally, non-EU European PGT students show similar patterns to those at first degree level. First, we observe a substantial decline between 2003/04 and 2004/05, when 10 countries joined the European Union. Numbers then recovered in 2007/08 but started to plateau in 2009/10, showing signs of decline from 2013/14 onwards.

At the PGR level, as shown in figure 6.6, patterns are slightly different. In this case, patterns across all continents/world regions are consistent with the general patterns shown in chapter 2, which indicates that the total number of first-year PGR non-EU international students started to

decline from 2013/14 onwards, suggesting a lagged effect of the Coalition government policies. This may sound like a contradiction, considering that, above, I have suggested that PGT students from continents containing 'low risk nationalities' may have not been affected by the Coalition policies to the same extent than those outside this list. However, this list only allows students from these countries to make the visa application easier –e.g. they do not need to provide evidence of their finances, academic qualifications or English language proficiency to the Home Office (MAC 2018: 12)– and it does not offer privileges to these students in terms of changing visa routes and stay in the UK after graduation. Considering that previous research suggests that PhD students are more likely to include study within broader plans to migrate as 'they [are] often more flexible about future plans, and willing to travel widely to find the best employment prospects' (Mavroudi and Warren 2013: 268), it is likely that the closing of the post-study work route in 2012 (Home Office 2011) have had an effect in the patterns of incoming PGR non-EU international students.

In this sense, we see a clear reduction in the numbers of PGR Middle-Eastern, African and South American students from 2013/14 onwards. In the case of first-year PGR students coming from the Middle East, numbers experienced phenomenal growth between the introduction of the first Prime Minister Initiative until 2014/15, when it became the second largest source world region, just after Asian students. In the year 2000/01, there were 635 first-year PGT Middle-Eastern students, growing up to 2,105 in 2014/15. However, during the last two years in my dataset, numbers declined abruptly from 2,105 to 1,505. For African students, patterns differ slightly, with clear signs of growth between 2003/04 and 2007/08, a year when numbers showed signs of decline, followed by intermittent periods of modest growth and decline until 2010/11, when numbers grew again until 2013/14, when they started to decline from 1,405 down to 1,095 in 2016/17. Lastly, in the case of South American students, numbers appear to be relatively stable until 2011/12, when numbers started to grow until 2015/16, from 240 to 515. However, numbers declined in the final academic year of my dataset, down to 290.
Finally, in the case of first-year PGR Australasian students, numbers remained fairly steady throughout the whole period under study. In 1995/96, there were 150 first-year Australasian students in UK higher education pursuing a PGR degree, and there were 155 in 2016/17. Numbers reached a peak in 2007/08, when they went up to 180, and a valley in 1996/97, when the numbers of Australasian students went down to 120. Again, non-EU European students show similar patterns to the other levels of study, declining in 2004/05, due to the accession of 10 countries to the European Union, and again in 2013/14.

In the lines above, I have shown that, in the period under study, students coming from Asia have been growing at higher rates than those from other continents/world regions, particularly at the PGT level. In 2016/17, first-year PGT Asian students represented almost three quarters of all non-EU international students. I have also shown that students from continents/world regions other than Asia display varying patterns of growth, plateau and decline at different levels of study, which have varying degrees of responsiveness to UK policy environments. However, this picture is partial and do not show the variation that exist within continents. Particularly, the growth in the numbers of Asian students hide the fact that UK policy environments clearly have had a different effect on the students from the two largest Asian sending countries: India and China. In fact, as we will see in the following lines, the period under study is characterised by the growth of both Chinese and Indian students and subsequent diversion, when the numbers of Indian students started to decline dramatically since 2010/11. In this sense, figures 6.7, 6.8 and 6.9 display the evolution of numbers of students coming from China, India and the rest of non-European Union nations for first degree, PGT and PGR levels of study respectively. Again, distinct policy and mobility phases are represented using dashed lines.



**Figure 6.7.** Evolution of first-year first degree non-EU international student numbers by whether they are from China, India and other non-EU countries (1995/96 - 2016/17).



**Figure 6.8.** Evolution of first-year PGT non-EU international student numbers by whether they are from China, India and other non-EU countries (1995/96 – 2016/17).



**Figure 6.9.** Evolution of first-year PGR non-EU international student numbers by whether they are from China, India and other non-EU countries (1995/96 – 2016/17).

The figures above tell us two main stories: 1) the increasing importance of China as a sending country to the UK throughout the period of study, and 2) the decline in numbers of non-EU students coming from countries other than China, particularly India. This situation is particularly dramatic at the PGT level. Moreover, China also displays a substantial stall and decline of its students pursuing a degree in the UK –either a first degree, PGT or PGR– during the first plateau phase –between 2003/04 and 2007/08–, suggesting that its students may be particularly sensitive to exchange rate fluctuations. Interestingly, we also observe a stalling of numbers of students coming from countries other than India and China during this phase, but this stalling is much more moderate and appears to stop at the middle of the period of the first plateau phase, suggesting that the overall stalling of numbers in this period was mostly caused by Chinese students. Moreover, we do not observe this phenomenon having an impact on Indian students, with the exception of Indian PGR students, which their numbers started to plateau in 2003/04 and remained stable until the end of the period.

In any case, it is certainly striking to observe how rapidly the numbers of Chinese students have grown throughout the period at stake. In 1995/96, there were only 135 first-year first degree Chinese students, which represented less than 1 percent of all first-year first degree non-EU international students. During the first Prime Minister's Initiative, numbers of Chinese students grew up to 8,960, representing 29 percent of all first-year first degree non-EU international students. This numbers sank during the first plateau period, going down to 7,395, representing 24 percent of the total. Then, numbers grew again during the second Prime Minister's Initiative phase, up to 16,355 in 2011/12. China's share of total non-EU international students also rose to 33 percent. These numbers remained relatively stable during the Coalition government's policy phase, growing moderately up to 18,305 –a share of 34 percent– by the end of the period.

The numbers of first-year first degree Indian students also grew remarkably until 2010/11, although less impressively than their Chinese counterparts. In 1995/96, there were 160 first-year first degree Indian students in UK higher education, representing less than 1 percent of total non-EU international students. Numbers grew at a relatively constant rate until 2010/11, as the first plateau phase does not appear to apply to Indian student numbers. Between 1995/96 and 2010/11, numbers increased to 2,780, representing 9 percent of all non-EU international students. However, these figures dwindled markedly in the following years, down to 1,965 in 2016/17, representing 5 percent of all non-EU international students.

As shown in figure 6.8, patterns are similar at the PGT level, but with more dramatic features. In 1995/96, there were 410 first-year PGT Chinese students, 2 percent of total first-year PGT non-EU international students. The UK higher education sector witnessed a phenomenal expansion of these numbers during the first Prime Minister's Initiative, growing up to 14,210 –30 percent of total non-EU international students– in 2003/04. As at the first degree level, numbers plateaued and declined between 2003/04 and 2007/08, down to 11,520. In the latter year, the share of first-year PGT Chinese students dropped by almost 10 percent points, down to 21 percent. However, in subsequent phases, numbers did not stop growing –with the exception of a short plateauing between 2013/4–, up to 35,285 in 2016/17. In the last year of my dataset, first-year PGT Chinese students represented almost half of the total non-EU international student population in UK higher education institutions. This increase in the share of first-year PGT Chinese students was cause by both an increase in the numbers of Chinese students and a decline, from 2010/11 onwards, of incoming students from other countries, particularly from India.

As shown in figure 6.8, the numbers of first-year PGT Indian students grew significantly from 1995/96 to 2010/11, with two periods were this growth slowed down –between 2003/04 and 2005/06 and 2008/09 and 2010/11. In 1995/96, there were 690 first-year PGT Indian students in UK higher education institutions, representing almost 4 percent of total non-EU international students. By 2010/11, these numbers had grown twenty-fold, up to 14,785. In this year, Indian students represented almost 20 percent of the total UK's first-year PGT non-EU international population. However, since the beginning of the Coalition government's policies phase, this number declined dramatically, down to 5,070 in 2016/17. In the last year of my dataset, the share of first-year PGT Indian students went down to 1997/98 levels, representing less than 7 percent of the total first-year PGT non-EU international population. During this period, we also observe a decline in the numbers of students coming from countries other than India and China. There was a clear dip between 2010/11 and 2012/13, only to grow again the following year. This was followed by four years of decline. Within the Coalition government's policy phase, the numbers of first-year PGT non-EU international students coming from countries other than India and China and China declined from 39,945 (53 percent of the total) to 36,880 (48 percent of the total).

Finally, the evolution of patterns of recruitment of first-year PGR students display similar trends for Chinese and non-EU countries other than China and India, but with some peculiarities for Indian students. First, we observe that the numbers of first-year PGR Chinese students also grew significantly during the first Prime Minister's Initiative –from 295 (6 percent of all students)

in 1995/96 to 1,425 (19 percent of all students) in 2004/05. It appears that the first plateau period took effect from 2004/05 onwards, reaching a low in 2007/08 when numbers went down to 1,030 (13 percent share). Then numbers grew again until 2014/15, up to 1,790 (18 percent of the total). Numbers then plateaued, growing by just 15 students between 2014/15 and 2016/17. However, due to a dramatic decline in students from countries other than India and China, the share of first-year PGR Chinese students increased to 21 percent.

On the other hand, Indian students show quite interesting patterns, hardly unrelated to the patterns found among first degree and PGT Indian students. Indeed, numbers grew during the first Prime Minister's Initiative, from 165 in 1999/2000 to 460 2004/05, with its share increasing from 3 percent to 6 percent. However, in subsequent years, numbers remained stable, from 460 in 2004/05 to 450 in 2016/17. Notwithstanding, its share dwindled down to 5 percent in the last year of my dataset, mostly due to an increase in the numbers of first-year PGR Chinese students.

The patterns of incoming Indian and Chinese students partly explain a shift in the balance of the main source countries of non-EU international students in UK higher education, particularly when thinking about the development of these source countries. As explained in chapter 5, researchers suggest that, in the 2010s, the most common type of student mobility is between 'developing countries (and especially the newly industrialising economy (NIE) sub-grouping) to developed ones' (Perkins and Neumayer 2014: 247). Using the World Bank's classification of countries based on their gross national income (GNI), I found that this was certainly the case in UK higher education in 2016/17, where the majority of first degree (49 percent), PGT (62 percent) and PGR (40 percent) come from the NIE sub-grouping. However, has this always been the case? I explore this issue in figures 6.10, 6.11 and 6.12, where I look at how the numbers of students – classified using the World Bank's classification (World Bank data team 2016)– have evolved in the period under study, for first degree, PGT and PGR students respectively.



Figure 6.10. Evolution of first-year first degree non-EU international student numbers by World Bank's classification of countries by income per capita (1995/96-2016/17).



Figure 6.11. Evolution of first-year PGT non-EU international student numbers by World Bank's classification of countries by income per capita (1995/96-2016/17).



Figure 6.12. Evolution of first-year PGR non-EU international student numbers by World Bank's classification of countries by income per capita (1995/96-2016/17).

An interesting feature found in all the figures above is that, at the beginning of the period, students from high-income countries made up the majority of students across all levels of study, a situation that changed during the first Prime Minister's Initiative. At the first degree level, students from high-income countries represented 42 percent –there were 7,665 students from these countries– of all first-year non-EU international students. However, during the first Prime Minister's Initiative, the numbers of students from these countries grew very modestly, up to 9,425 in 2003/04. This could be a result of both of a broader milieu of increasing mobility worldwide, particularly from the emerging middle classes in newly industrialised economies (Li 2006; Lomer 2017a), and the beginning of explicit efforts to recruit from 'emerging markets' (Blair 1999). We also observe, in all cases, that the patterns of upper middle-income countries –which include China– and those from lower middle-income countries –which include India– resemble those shown above for China and India alone, suggesting that these two countries dominate student numbers at these two categories. The only exception appears to exist at the PGR level, where we

observe a sudden reduction of students coming from upper middle-income countries. This is due to the fact that some of these upper middle-income countries, particularly Iraq, Malaysia and Brazil, dropped the numbers of students they sent to the UK while Chinese student numbers plateaued. The figures above also indicate that low-income countries send negligible numbers of students.

In summary, what we have seen in this sub-section is that, in the past two decades, upper middle-income countries, particularly China, have ended up dominating the numbers of first-year non-EU international students, while high-income countries, which sent most of non-EU international students at the beginning of the 1990s, have been losing their share. It is also important to highlight how UK policies, particularly those seeking to restrict mobility, have different effects in different national contexts. We have seen that, while India has historically expanded the numbers it sent to the UK between the mid-1990s and 2010, numbers of first-year Indian students suddenly dropped once UK became unwelcoming. Again, this have had an effect on the diversity of the sector. In this sense, we can safely say that one of the unintended consequences of UK policies in the past 10 years have been the reduction of diversity of the non-EU international student body in UK higher education institutions.

#### 3.2. Analysis by subject of study

In chapter 5, I identified that non-EU international students in UK higher education in 2016/17 were unevenly distributed across subjects of study. Students undertaking an undergraduate or postgraduate taught degree were much more likely to be enrolled in a course related to business, economics and law. This is consistent with previous speculative arguments about the increasing importance over time of certain fields of study, particularly business-related subjects in a context of marketised, demand-driven, higher education systems (Brown et al. 2011; Choudaha 2017; Kelo et al. 2006). Moreover, from the supply-side, Findlay and colleagues

identified that certain HEIs would increase their offering in business-related subjects in order to attract more non-EU international students (Findlay et al. 2017).

In this subsection, I offer a descriptive narrative on how the distribution of non-EU international students across subjects of study has changed over time. As in chapter 5, I use cost centres as a proxy for fields of study. As explained in chapter 4 (Data and Methods), one of the reasons why I have decided to use cost centres rather than the Joint Academic Coding System (JACS) –an alternative measurement of subject of study– is that the former has undergone fewer changes over the period under study, thus allowing for more consistency throughout the period. In the case of cost centres, they were changed once between 1995/96 and 2016/17, in the academic year 2012/13 (HESA 2019a). In the case of JACS, this system was changed three times during the period under study (HESA 2019c). Unfortunately, the coding of cost centres prior to 2012/13 does not allow me to apply Purcell and colleagues' classification of subjects of study (2009), as I did in chapter 5 for cost centres in 2016/17. This is due to the fact that in cost centres prior to 2012/13 there is no distinction of "Law" as a single cost centre. Instead, the latter is included within the broad cost centre "Social studies", which contains both law and economics-related subjects and academically-focused social science subjects such as Politics or Sociology (HESA 2011).

In the following lines, I chart the numbers of first-year non-EU international students across UK HEIs, exploring the top  $10^{34}$  cost centres that recruited the most non-EU international students at the beginning period under study -1995/96– and at the end of each policy phase identified in chapter 2 but taking into account the change in cost centre coding applied in 2012/13: at the end of the diagnosis phase in 1999/2000, the expansionary period of the first Prime Minister's initiative in 2003/04, the first plateau period in 2007/08, the second Prime Minister's initiative. However, in this case, I use 2011/12 rather than 2010/11, to show the end of the period

 $<sup>^{34}</sup>$  The number of "old" cost centres are N=37 and N=46 "new" cost centres.

where "old" cost centres were used. Then, I display the numbers for the first academic year for the "new" cost centres –2012/13– and the end of the period for the 2010 Coalition and 2015 Conservative governments' policies in 2016/17. Table 6.3 shows the top 10 recruiting cost centres, in absolute terms, for the latter periods. Table 6.4 displays the top 10 cost centres in terms of shares of students who are non-EU international.

1995		1999		2003		2007		2011		2012		2016	
Cost centre	Ν	Cost centre	Ν	Cost centre	Ν	Cost centre	Ν	Cost centre	Ν	Cost centre	Ν	Cost centre	Ν
First degree											16 55		
Social studies	3,175	Business	2,930	Business	7,430	Business	7,815	Business	13,945	Business	0	Business	15,550
Business	2,895	Social studies	2,395	Social studies	4,325	Social studies Humanities &	4,780	Social studies Humanities &	6,340	Law	3,570	Law	4,005
Electrical eng.	1,515	Electrical eng. Design & creative	1,985	Electrical eng. Humanities &	3,580	languages	1,805	languages	2,700	Economics	2,945	Economics	2,925
IT Humanities &	1,070	arts Humanities &	1,070	languages	1,910	IT	1,775	IT	2,665	Mathematics	2,520	Art & design	2,720
languages	890	languages	970	Mathematics Design & creative	1,675	Design & creative arts	1,775	Mathematics Design & creative	2,190	Art & design Mechanical	2,185	Mathematics Mechanical	2,595
Mechanical eng. Design & creative	885	Mathematics	750	arts	1,565	Mathematics	1,740	arts	2,185	eng.	1,900	eng.	2,135
arts	855	Mechanical eng.	705	Biosciences	1,070	Electrical eng.	1,490	Electrical eng.	2,085	Electrical eng.	1,855	Electrical eng.	1,935
Mathematics	760	General eng.	615	Mechanical eng.	1,020	Mechanical eng.	1,375	Mechanical eng.	1,850	IT	1,790	Biosciences	1,790
Architecture	755	Architecture	550	IT	880	Biosciences	1,050	Biosciences	1,480	Biosciences	1,465	IT	1,770
General eng.	450	Biosciences	515	General eng.	770	General eng.	915	Architecture	1,185	Architecture	1,330	Architecture	1,505
PGT													
Business	4,180	Business	6,210	Business	14,600	Business	19,12 5	Business	29,160	Business	28,14 5	Business	27,645
Social studies	3,585	Social studies Humanities &	4,125	Social studies	8,480	Social studies	8,080	Social studies	11,110	Economics	4,090	Economics	4,150
Education Humanities &	1,560	languages	1,440	Electrical eng. Humanities &	4,475	IT Humanities &	3,590	IT Humanities &	3,595	Law	3,710	Law	3,670
languages	1,410	Electrical eng.	1,260	languages	2,565	languages	2,470	languages	3,405	IT	3,055	Art & design	3,065
Clinical medicine	690	Education Design & creative	995	Education Design & creative	1,750	Electrical eng.	1,975	arts	2,955	Art & design	2,340	Education	2,940
IT Design & creative	680	arts	840	arts	1,470	Design & creative arts	1,745	Electrical eng.	2,440	Media studies	2,205	Architecture	2,760
arts	545	Clinical medicine	535	Architecture	1,140	Education	1,705	Education	2,200	Electrical eng.	2,075	ľΤ	2,585
Electrical eng.	455	IT	530	General eng.	1,130	Biosciences	1,365	Architecture	1,955	Education	2,030	Media studies	2,470
General eng.	415	Architecture	510	Media studies	1,110	General eng.	1,340	Mechanical eng.	1,825	Architecture	1,930	Politics	2,270
Architecture	390	Mechanical eng.	395	IT	1,110	Architecture	1,270	Media studies	1,815	Politics	1,905	Electrical eng.	2,020

						1		1	i			1	
PGR													
Social studies	735	Humanities & languages	790	Humanities & languages	1,040	Humanities & languages	970	Social studies	1,065	Business	770	Business	765
Humanities & languages	695	Social studies	705	Social studies	960	Social studies	950	Humanities & languages	970	Biosciences	645	Clinical medicine	640
Biosciences	310	Electrical eng.	500	Electrical eng.	885	Business	685	Business	755	Clinical medicine	525	IT	555
Electrical eng.	250	Business	360	Business	525	Biosciences	635	Biosciences	630	Electrical eng.	520	Biosciences	555
Business	250	Biosciences	345	Biosciences	470	IT	470	Clinical medicine	535	IT	495	Electrical eng.	500
Education	230	Education	325	Education	395	Electrical eng.	465	IT	495	Education	400	Mechanical eng.	415
Clinical medicine	225	Mechanical eng.	280	Clinical medicine	325	Clinical medicine	445	Electrical eng.	475	General eng.	355	Education	355
Mechanical eng.	210	Clinical medicine	220	General eng.	320	General eng.	355	Mechanical eng.	390	Mechanical eng.	350	Chemistry	320
IT	195	General eng.	210	Mechanical eng.	305	Education	340	Education	380	Chemistry	315	General eng.	295
Agriculture	160	Architecture	155	Chemistry	210	Mechanical eng.	280	Chemistry	350	Mathematics	255	Architecture	255

**Table 6.3.** Top 10 recruiting cost centres of first-year non-EU international students –in absolute numbers– across first degree, PGT and PGR levels of study in 1995/96 and at the end of each policy period identified in chapter 2. It also includes the last year of the "old" cost centres and the first year of the "new" cost centres.

		I		I		I		l				l	
1995	1999			2003		2007		2011		2012		2016	
Cost centre	%	Cost centre	%	Cost centre	%								
First degree													
Chemical eng.	19.4%	Chemical eng.	17.9%	Chemical eng.	24.1%	Chemical eng.	30.6%	Chemical eng.	31.4%	Area studies	31.3%	Materials eng.	32.5%
Electrical eng.	17.7%	Civil eng.	13.3%	Business	16.8%	Electrical eng.	20.3%	Business	25.6%	Chemical eng.	29.6%	Chemical eng.	25.9%
Civil eng.	12.4%	Materials eng.	9.9%	Materials eng.	16.2%	Mechanical eng.	18.2%	Electrical eng.	22.3%	Business	28.8%	Economics	23.9%
Pharmacy	11.4%	Mechanical eng.	9.3%	Hospitality	15.8%	Materials eng.	17.4%	Veterinary science	20.9%	Economics	28.5%	Business	23.4%
Veterinary science	11.2%	Electrical eng.	9.2%	Electrical eng.	15.1%	General eng.	16.6%	Materials eng.	19.5%	Materials eng.	24.7%	Civil eng.	22.6%
Mechanical eng.	10.3%	General eng.	9.1%	Mathematics	15.0%	Business	16.4%	Mechanical eng.	19.1%	Electrical eng.	24.2%	Electrical eng.	22.4%
General eng.	9.5%	Veterinary science	8.4%	Mechanical eng.	14.0%	Hospitality	14.6%	General eng.	18.6%	General eng.	22.3%	Mechanical eng.	19.2%
Materials eng.	9.3%	Pharmacy	8.4%	Civil eng.	13.6%	Mathematics	13.4%	Civil eng.	16.7%	Mechanical eng.	21.2%	Veterinary science	17.5%
Architecture	8.5%	Business	7.4%	General eng.	12.2%	Veterinary science	12.7%	Mathematics	15.7%	Civil eng.	20.4%	Law	16.9%
Business	7.8%	Architecture	7.3%	Pharmacy	11.5%	Civil eng.	12.0%	Pharmacy	14.7%	Law	18.0%	Mathematics	16.7%
PGT													
Clinical dentistry	40.6%	Materials eng.	36.5%	Materials eng.	61.3%	Electrical eng.	67.6%	Electrical eng.	73.1%	Economics	75.7%	Materials eng.	73.7%
Agriculture	32.5%	Clinical dentistry	33.7%	Hospitality	60.2%	Hospitality	62.4%	Business	68.3%	Electrical eng.	72.9%	Economics	72.5%
Chemical eng.	30.5%	Hospitality	32.0%	Chemical eng.	58.6%	General eng.	59.2%	Chemical eng.	67.0%	Business	69.2%	Electrical eng.	68.4%
General eng.	28.4%	Chemical eng.	29.5%	Electrical eng.	54.0%	Materials eng.	58.7%	Materials eng.	63.1%	Hospitality	67.2%	Business	65.5%
Civil eng.	27.9%	Business	28.2%	Business	48.8%	Business	58.3%	Hospitality	62.0%	Chemical eng.	64.7%	General eng.	64.3%
Clinical medicine	26.8%	Geography	24.8%	Mechanical eng.	47.1%	IT	57.3%	General eng.	58.8%	Materials eng.	63.5%	Chemical eng.	61.2%
Geography	25.7%	Social studies	24.4%	General eng.	46.6%	Chemical eng.	56.0%	IT	57.7%	Mathematics	59.4%	Anthropology	59.6%
Veterinary science	25.0%	Civil eng.	23.2%	Mathematics	42.2%	Chemistry	52.0%	Chemistry	56.8%	IT	57.9%	Civil eng.	59.4%
Materials eng.	24.0%	Clinical medicine	22.2%	Civil eng.	41.8%	Mechanical eng.	50.2%	Mathematics	56.5%	Civil eng.	57.2%	Hospitality	54.8%
Hospitality	23.3%	Mechanical eng.	21.8%	Clinical dentistry	39.3%	Mathematics	48.8%	Civil eng.	52.5%	General eng.	56.9%	Mathematics	53.9%

		I		I			1						
PGR													
Agriculture	43.0%	Architecture	44.4%	Civil eng.	54.4%	Hospitality	53.9%	Electrical eng.	50.8%	Electrical eng.	54.8%	Business	52.5%
Architecture	36.0%	General eng.	40.0%	Hospitality	51.4%	Architecture	53.4%	Business	50.3%	Economics	54.2%	Architecture	51.7%
Civil eng.	34.6%	Electrical eng.	39.4%	Architecture	50.5%	Electrical eng.	51.4%	Clinical dentistry	48.7%	Business	52.4%	Electrical eng.	50.6%
Electrical eng.	33.9%	Business	39.1%	Business	48.7%	Business	51.2%	Agriculture	46.1%	Agriculture	51.8%	Economics	48.9%
Media studies	33.8%	Chemical eng.	37.9%	Electrical eng.	48.3%	Agriculture	50.8%	Architecture	44.1%	Materials eng.	48.4%	Materials eng.	48.6%
Materials eng.	33.5%	Mechanical eng.	35.9%	Materials eng.	46.5%	General eng.	50.0%	General eng.	43.3%	Clinical dentistry	46.9%	Civil eng.	48.1%
Business	31.0%	Civil eng.	35.2%	Chemical eng.	45.8%	Civil eng.	49.1%	Mechanical eng.	43.2%	Architecture	46.2%	Area studies	46.7%
General eng.	30.9%	Social studies	34.9%	Mechanical eng.	43.0%	Materials eng.	48.3%	Materials eng.	42.6%	Theology	45.1%	IT	44.2%
Veterinary science	30.3%	Education	34.5%	Social studies	42.2%	Chemical eng.	46.5%	IT	42.6%	General eng.	44.7%	Clinical dentistry	43.9%
Chemical eng.	30.2%	IT	31.7%	General eng.	41.5%	IT	46.4%	Civil eng.	40.7%	Pharmacy	44.3%	Anthropology	42.7%

**Table 6.4.** Top 10 recruiting cost centres of first-year non-EU international students –in relative terms– across first degree, PGT and PGR levels of study in 1995/96 and at the end of each policy period identified in chapter 2. It also includes the last year of the "old" cost centres and the first year of the "new" cost centres.

The first feature to highlight in table 6.3 is the fact that "business and management" is the top recruiting cost centre across all years for both first degree and PGT non-EU international students -with the exception of 1995/96 at the first degree level, which came second. We also observe that, throughout the period at stake, the weight of "business and management" grew over time. At the first degree level, there were 2,895 non-EU international students enrolled in "business and management courses", representing 18.5 percent. By 2003/04, this number more than trebled, up to 7,430 (25 percent). During the first plateau period, this number remained stable, but almost doubled after the expansionary phase of PMI2. In 2011/12, there were 13,945 non-EU international students undertaking a course in "business and management", representing 33 percent of the total non-EU student population. The next academic year, when the new coding for cost centres was implemented, there was an increase of 2,600 first-year first degree non-EU international students in "business and management" courses (33 percent). This increase, though, could be due to a change in the code. Interestingly, during the Coalition government policies' phase, the numbers of first-year first degree non-EU international students doing a business degree declined by 1,000 (30 percent). Also, as expected from the findings in chapter 5, in 2012/13 and 2016/17, the cost centres that recruited the most non-EU international students after business were "law" and "economics". These were previously subsumed within social studies -and so perhaps we can surmise that these specific cost centres were driving the top 10 status of "social studies" in years previous to 2012/13.

At the PGT level, we observe similar patterns, with the cost centre "business and management" being the top recruiter across all years, increasing in importance over time and decreasing slightly between 2012/13 and 2016/17. In 1995/96, there were 4,180 first-year PGT non-EU international students undertaking a degree in "business and management", representing 24 percent of the non-EU PGT student population. By 1999/2000, this number had grown to 6,210 (31 percent). During the expansionary phase of the PMI1, these numbers more than doubled, up to 14,600 (32 percent). Interestingly, during the first plateau period, "business and

management" also grew, while other cost centres remained relatively stable –with the exception of "electrical engineering", which declined substantially, and "IT", which increased significantly. In 2007/08, non-EU PGT students grew by 4,525 (37 percent). During the expansionary phase of PMI2, numbers grew again but at a faster rate, by almost 10,000 (40 percent). Finally, we observe a decline during the Coalition government's phase, with number decreasing between 2012/13 and 2016/17 by 500 (36 percent).

At the PGR level, we also observe an increase in the relevance of the cost centre "business and management", which became, in 2012/13 and 2016/17 the top recruiting cost centre of firstyear PGR non-EU international students. Table 6.3 also shows that, between 1995/96 and 2011/12 –during the "old" cost centres– the cost centre "humanities and languages" was the main recruiter of non-EU international students. However, this pattern disappeared as "humanities and languages" was removed as a cost centre and split into other minor cost centres such as "History", "Classics' or "Philosophy" (HESA 2011).

Table 6.4 shows the top ten cost centres across selected years in terms of cost centres' share of non-EU international students. At the first degree level, while business appear to be one of the most "internationalised" cost centres, it is also important to remark how STEM subjects –such as "chemical engineering" or "materials engineering"– also heavily rely on non-EU international students, supporting similar findings of previous research (Brooks and Waters 2013). This pattern also appears to exist at the PGT and PGR levels. At these three levels of study, "business and management" became increasingly internationalised, relying more, over time, on non-EU international students.

## 4. What explains the variation in the proportions of students who are non-EU international in UK HEIs between 1995/96 and 2016/17? Findings from bivariate statistics

This section begins to unpack the drivers of these trends over time, building on the findings put forward in chapter 5. Using descriptive and bivariate statistics, I test the hypothesis that the likelihood of an institution reaping a larger share of the growth of non-EU-international students during the two periods of rapid growth nationally is greater if they 1) are higher prestige institutions 2) are located in the capital or another major metropolitan area, 3) recruit students to a less diverse range of subject areas, 4) recruit students from a less diverse range of countries of origin. I also test the related hypothesis that, during periods of plateau at the national level, the four attributes listed above also predict whether institutions will experience continued growth in the percentage of students who are non-EU-international, albeit at a more modest rate than before, instead of a levelling off or even a decline.

First, I test the hypothesis that the proportion of students enrolled at an institution grew at different rates across the following institutional characteristics: institutional prestige and geographical location. I hypothesise that shares of non-EU international students tend to be higher at more prestigious institutions –a relationship that persists over time. I also hypothesise that growth rates in the shares of students who are non-EU international are higher for more prestigious institutions during periods of expansion and that they suffer less decline in periods of plateau. I also test the hypothesis that this has also been the case for institutions located in major metropolitan areas, and in London in particular.

Second, I look at the association between HEIs' shares of students who are non-EU international and measurements that may capture strategies that institutions follow to recruit more students from outside the EU, and how these associations have evolved over time. I test the hypothesis that growth rates in the shares of non-EU international students, during expansionary periods, is higher in those institutions where non-EU students are concentrated in business-related

subjects, which are highly popular among mobile students (Kelo et al. 2006). I also examine the hypothesis that these HEIs suffer less decline during plateau periods. Finally, I test the hypothesis that this has also been the case in HEIs that recruit their non-EU international student population from a narrower range of countries.

To do so, I draw from the predicter drivers developed in chapter 3, operationalised in the variables described in section 4.2 of chapter 4 "Data and Methods". In this section, the dependent variable is the percentage of students who are non-EU international in UK higher education institutions. The first explanatory variable, institutional prestige, is operationalised using the variable *HEI type* described in chapter 3, which includes four categories: 1) The Golden Triangle, 2) other Russell Group<sup>35</sup> universities, 3) non-Russell Group pre-1992 HEIs, and 4) post-1992 HEIs. The second explanatory variable, location of HEIs, is a simplified version of the City and Town Classification of Constituencies and Local Authorities produced by the House of Commons (Baker 2018), which classifies HEIs based on the type of settlement they are located in in the following categories: 1) Core City (London), 2) Core City (outside London), and 3) located elsewhere. The third explanatory variable, the percentage of non-EU international students in a business-related course of the total non-EU international student population in UK HEIs, is operationalised using the percentage of non-EU international students in the cost centre "business and management"36. Finally, as in chapter 5, I use Simpson's diversity index D (1949), which gives the probability -expressed in percentages- that any two students randomly selected from a HEI will be from different countries.

<sup>&</sup>lt;sup>35</sup> HEIs have been recorded as 'Russell Group' if they belonged to the mission group in 2012, the last year in which it was expanded (Durham, Exeter, Queen Mary University of London and York joined the Russell Group in 2012). There have been other rounds of expansion of the Russell Group since it was founded in 1994: in 1998, King's College and Cardiff joined the mission group; Queen's Belfast in 2006.

<sup>&</sup>lt;sup>36</sup> As explained in chapter 4 (Data and Methods), the coding of cost centres changed in 2012/13. Before 2012/13, the only standalone cost centre related to Purcell et al.'s (2009) category of "Law, Economics and Management (LEM)" used in chapter 5 was "business and management". Thus, the classification develop by Purcell and colleagues could not be applied to "old" cost centres. Instead, to allow for continuity, I have used a cost centre that appeared in both "old" and "new" cost centres – "business and management". However, caution should be taken in case this change in the coding of cost centres have had an impact in the way HEIs classify its courses.

In the following lines, I explore the associations between the dependent variable and the explanatory variables briefly described above using a combination of descriptive statistics and measures of association. As in chapter 5, I use  $\eta^2$ (eta-squared) when the explanatory variable is categorical and R<sup>2</sup> (R-squared) when the explanatory variable is continuous. Both  $\eta^2$  and R<sup>2</sup> explain the proportion of the variation in Y that is associated with X.

#### 4.1. Institutional reputation

In chapter 5 we have seen that, in 2016/17, more prestigious HEIs had overwhelmingly higher shares of non-EU international students than HEIs at the lower end of the hierarchy, particularly at the first degree and PGT levels. At the PGR level, even though this relationship does not appear to be that strong, this is due to the fact that only a handful of less prestigious universities have sizeable postgraduate research programmes. Here, I hypothesise that these periods of growth and plateau have affected particular sectors of UK higher education differently, with a specific detrimental effect to those institutions at the lower end of UK's institutional hierarchy. Research by the Migration Advisory Committee has already shown that, since the election of the Conservative-led coalition government, the education sector that has been affected the most in regards to non-EU international student numbers is the Further Education (We)f, 2002: 58). In the latter case, 'FE visa sponsorships have been falling year-on-year since 2011, with a marked drop in 2012', decreasing by 78 percent since 2010 (MAC 2018: 19). However, here I pose the question whether institutional hierarchies in higher education are also related to different rates of growth and stagnation in the periods of policy and recruitment described in chapter 2<sup>37</sup>.

<sup>&</sup>lt;sup>37</sup> As in the previous section, the variable of interest in this analysis is the percentage of first-year non-EU international students at UK HEIs in order to factor in institutional size measured in total enrolments. Institutions that have less than 100 first-year students at different levels of study from all domiciles are excluded from the analysis in order to avoid highly unstable percentages. Again, the final count of HEIs per academic year included in this research's sample can be found in the methods chapter.

Figures 6.13, 6.14 and 6.15 show the evolution of the mean share of first-year non-EU international students by HEI type from 1995/96 to 2016/17 for first degree, PGT and PGR levels of study respectively.



Figure 6.13. Evolution of mean percentages of non-EU international first degree entrants by HEI type from 1995/96 to 2016/17.



Figure 6.14. Evolution of mean percentages of non-EU international PGT entrants by HEI type from 1995/96 to 2016/17.



Figure 6.15. Evolution of mean percentages of non-EU international PGR entrants by HEI type from 1995/96 to 2016/17.

These figures suggest several features regarding the evolution of the shares of non-EU international students across HEI types in the past two decades. First, at the first degree level, we observe that the distance between Golden Triangle HEIs and the rest of the sector is substantial throughout the period under study. It also evident that Golden Triangle institutions are less sensitive to the policy phases described in chapter 2. On the one hand, Golden Triangle universities show a relatively stable upward pattern, suggesting that these institutions may be more in control of their projected shares of non-EU international students. On the other hand, these institutions were the only ones that did not suffer the consequences of the Coalition government policies. This is not surprising, considering these universities belong to the 'global super league', a subset of institutions characterised by their 'autonomy relative to global field (italics in the original)' (Marginson 2008). Demand for education in this subset of HEIs may be sheltered from market dynamics as 'demand always exceeds supply' (Marginson 2006: 1). Second, we observe that non-Golden Triangle Russell Group and non-Russell Group pre-1992 HEIs show strikingly similar patterns. Notwithstanding, it appears that the latter institutions increased their distance with the former during the first plateau period (2003/04 - 2007/08), although Russell Group HEIs caught up during the expansionary phase of the second Prime Minister's Initiative. During the Coalition policies' phase, both types of HEIs experienced decline. Finally, post-1992 HEIs show growth, plateau and decline patterns similar to the Russell Group and other pre-1992 universities but maintaining a substantial distance throughout. Moreover, the plateau and decline period brought about by the Coalition government's policies appears to have taken effect almost immediately.

At the PGT level, Golden Triangle universities show very similar patterns, with a relatively stable upward trend. However, the distance between these universities and the rest of the sector diminished during the expansionary period of the first Prime Minister's Initiative. Both Russell Group and other pre-1992 universities caught up in 2003/04, showing patterns of phenomenal growth between 1999/00 and 2003/04. Post-1992 HEIs also show remarkable growth patterns during the first expansionary phase of the first Prime Minister's Initiative. The sector appears to

diverge significantly after the expansionary phase of PMI2. First, other Russell Group universities grow substantially during this period, continuing after 2010/11, when the Conservative-led coalition government took power. The only exception is a dip in the final academic year, which could be attributed to the introduction of master's loans in that academic year, which increased participation at the PGT level among UK-based graduates, particularly at "old" universities (Adams et al. 2019). Second, the decline among post-1992 universities since 2010/11 is stark. By the end of the period, the mean share of students who were non-EU international at post-1992 institutions (20 percent) reached the level observed in 2003/04. Moreover, other pre-1992 HEIs show significant levels of decline since 2012/13, from 42 percent that academic year down to 36 percent in 2016/17. Again, the dip in the last academic year could be attributed to the introduction of master's loans (ibid.).

Finally, the mean shares of non-EU international PGR entrants display a highly erratic behaviour, particularly among post-1992 institutions. This is due to two main reasons: 1) the number of post-1992 HEIs with more than 100 FTE first-year PGR students is relatively small, and this number varied substantially year-to-year as the amount of FTE students in these HEIs fluctuated below and above the 100 students' mark; and 2) although I decided to exclude those HEIs with less than 100 FTE students in order to avoid data instability, this number is still small enough to be sensitive to small changes. Furthermore, patterns of change over time in the mean shares of non-EU international PGR entrants for the other HEI types are also more erratic than at first degree and PGT levels. Again, this could also be related to the fact that the absolute numbers of PGR students tend to be smaller than at first degree and PGT levels. These caveats notwithstanding, Russell Group universities and other pre-1992 universities show signs of growth in the expansionary phase of the first Prime Minister's Initiative. Now, I turn to consider what the strength of the association between HEI types and the shares of students who are non-EU international looks like over time. To do so, I plot the  $\eta^2$ (eta-squared) for these associations for each academic year. Figure 6.16 shows this, distinguishing the policy phases described in chapter 2 using dashed lines.



**Figure 6.16.** Evolution of  $\eta^2$  values for the association between HEIs' shares of students who are non-EU international and HEI types for all levels of study between 1995/96 and 2016/17.

Figure 6.16 suggests that, at the first degree level, this association remained relatively flat between 1995/96 and 2007/08 –although with some erratic behaviour– and started to increase since the expansionary phase of the second Prime Minister's Initiative. Moreover, during the Coalition policies' phase,  $\eta^2$  values increased significantly. This is consistent with the descriptive analysis explained above, where we observed that Golden Triangle institutions kept an upward pattern while the other HEI types saw their shares of students who are non-EU international decline. At the PGT level, we observe that at the beginning of the period, the association between these two variables was very high, similar to the levels seen in 2016/17 (shown in chapter 5). However, these association started to decline during the expansionary phase of PMI1 and the first plateau period. This is due to the fact that during these two periods, the distance between HEI types in their shares of students who are non-EU international reduced significantly, as seen in the descriptive analysis shown above. However,  $\eta^2$  values shoot off after 2010/11, reaching levels seen at the beginning of the period. As we have seen in the descriptive analysis above, it was during this period when the sector started to diverge again.

Finally, at the PGR level, we do not observe any clear patterns. These associations appear to remain mostly flat throughout the period with some spikes at the beginning of the period and in 2006/07 and 2008/09. This could be due to the fact that mean percentages of students who are non-EU international students across HEI types remained relatively similar, as seen in figure 6.15, with the exception of post-1992 HEIs, which show highly erratic patterns.

### 4.2. Location of HEIs

In chapter 5 we have seen that, in 2016/17, HEIs located in London tended to have higher shares of non-EU international students than HEIs located elsewhere, at the first degree and PGT levels but not at the PGR level. Here, I hypothesise that these periods of growth and plateau have affected HEIs differently based on their location, with a specific beneficial effect to those institutions located in London. It has been a recurrent theme among commentators that London is particularly attractive to non-EU international students (QAA 2014).

Figures 6.17, 6.18 and 6.19 show the evolution of the mean share of first-year non-EU international students by HEI location –London, other major metropolitan city, and elsewhere– from 1995/96 to 2016/17 for first degree, PGT and PGR levels of study respectively.



Figure 6.17. Evolution of mean percentages of non-EU international first degree entrants by HEIs' location from 1995/96 to 2016/17.



Figure 6.18. Evolution of mean percentages of non-EU international PGT entrants by HEIs' location from 1995/96 to 2016/17.



Figure 6.19. Evolution of mean percentages of non-EU international PGR entrants by HEIs' location from 1995/96 to 2016/17.

At the first degree level (figure 6.17), we observe that the differences in the shares of students who are non-EU international between HEIs located in London and elsewhere are significant throughout the period under study. During the first expansionary period of PMI1, HEIs located everywhere experienced significant growth. The average share of students who are non-EU international in HEIs located in London increased from 8 to 12 percent, and 4 to 7 percent in HEIs located in other major metropolitan cities and elsewhere. We also observe that HEIs located in London experienced significant decline in the first plateau period, while HEIs located in the other two geographical categories kept growing until 2012/13. However, during the Coalition policies' period, HEIs located in London appear to keep growing, while HEIs located in the other two categories declined. This is consistent with the results shown in chapter 5, were we observed that the geographical location of HEIs was particularly important at explaining the distribution of shares of first degree entrants in UK HEIs.

At PGT level, patterns are quite different. First, compared to the first degree level, the differences in average shares of students who are non-EU international across locations appear less pronounced. Growth patterns appear quite similar across all locations during the expansionary phase of the first Prime Minister Initiative. However, the sector seems to diverge during the first plateau period. Since 2005/06, the average shares of students who are non-EU international in HEIs located in major cities other than London and elsewhere start to grow, while those located in London show signs of plateau. During the Coalition policies' period, while the average shares of non-EU international students in HEIs located in London remained quite stable throughout, these declined, particularly since 2013/14, for the other two categories.

Finally, at PGR level, growth patterns across all locations appear to be quite similar. These patterns, which are more erratic than in the other two levels of study, show substantial growth during the expansionary phase of the PMI1. These numbers appear to plateau during the first plateau phase for all locations. However, after the first plateau period, the average shares of students who are non-EU international in HEIs located in major metropolitan cities other than London show relatively erratic patterns, decreasing during the expansionary phase of PMI2, growing again during the election of the Conservative-led coalition government and declining again after 2013/14. Also, during the latter phase, HEIs located in London show growth patterns, while those located elsewhere plateaued and declined in the last academic year.

Now, I turn to consider what the strength of the association between HEIs' location and the shares of students who are non-EU international looks like over time. To do so, I plot the  $\eta^2$ (eta-squared) for these associations for each academic year. Figure 6.20 shows this, distinguishing the policy phases described in chapter 2 using dashed lines.



**Figure 6.20.** Evolution of  $\eta^2$  values for the association between HEIs' shares of students who are non-EU international and HEIs' location for all levels of study between 1995/96 and 2016/17.

Figure 6.20 suggests that, at the first degree level, this association decreases substantially during the expansionary phase of PMI1 and at the beginning of the first plateau period. Since 2004/05 this association kept decline but at a more moderate rate. However, this trend was reversed during the Coalition policies' phase, as  $\eta^2$  values started to increase again. This is consistent with the descriptive analysis explained above, where we observed that London HEIs kept an upward pattern while the other locations saw their average shares of students who are non-EU international decline.

At the PGT level, the evolution of this association shows similar patterns but in a less dramatic fashion. This association started to decline in the expansionary phase of PMI1 but started to grow modestly again in the first plateau period. This association started to increase again at the end of the Coalition policies' period, particularly since 2013/14.

Finally, at the PGR level, the evolution of this association appears to be more erratic than at the other levels of study. Despite this erratic behaviour, it appears that this association lost strength during the expansionary phase of PMI1. Since the latter phase, patterns appear to be relatively flat until the end of the Coalition policies' period, were it experienced to spikes, one in 2013/14 and in the last academic year.

## 4.3. HEIs' size of business provision to non-EU international students

As we have seen in chapter 5, in 2016/17, when controlling for other explanatory variables, the percentage of non-EU international students undertaking a degree in "Law, Economics and Management" (Purcell et al. 2009) is correlated with HEIs' share of students who are non-EU international at first degree and PGT levels of study. This relationship suggests that those HEIs that manage to get a higher share of students coming from outside the European Union tend to have a larger concentration of these students in these degrees. This is consistent with the literature, that suggests that HEIs tend to increase their offering in these subjects to make their provision more attractive to mobile students (Findlay et al. 2017). In this subsection, I explore how this relationship has evolved over time. Figure 6.21 plots the R<sup>2</sup> for the association between the dependent variable and the percentages of non-EU international students in each HEI undertaking a degree in the cost centre "business and management" across all levels of study.



**Figure 6.21.** Evolution of R<sup>2</sup> values for the association between HEIs' shares of students who are non-EU international and HEIs' percentages of non-EU international students undertaking a degree in "business and management" between 1995/96 and 2016/17.

Figure 6.21 suggests that, although erratic, this relationship has been relatively flat throughout the period at stake at first degree and PGT level, higher for the latter than the former. In the case of PGR students, the evolution of this association has been also erratic, with a spike in the academic years 2012/13 and 2013/14<sup>38</sup>. In these two academic years, it appears that around 30 percent of the variation in the dependent variable was explained by HEIs' percentages of non-EU international students undertaking a degree in business. These spikes could have been caused by the change in the coding in cost centres, which changed in 2012/13. Moreover, the fact that the numbers of PGR students are significantly smaller can cause that relatively small changes in the distribution of non-EU students across HEIs and subjects disproportionately affect this relationship, which may create spurious correlation.

<sup>&</sup>lt;sup>38</sup> I have performed data quality checks to ensure that this is not due to data editing mistakes.

#### 4.4. Diversity of the non-EU international student body

In chapter 5, I have shown that non-Golden Triangle Russell Group institutions tend to be less diverse as they have pulled a significant share of Chinese students entering UK higher education (Cebolla-Boado et al. 2018), particularly at the PGT level. This, in turn, establishes a relationship between the diversity of HEIs non-EU student bodies and their capacity to attract higher shares of students who are non-EU international. Moreover, I have also discussed that this may be due to the fact that those HEIs that concentrate their marketing activities in a narrow range of countries are generally more successful at recruiting non-EU internationals students. However, what does this relationship look over time across levels of study? This subsection addresses this question. Figure 6.22 plots the  $R^2$  for the association between this thesis' dependent variable and HEIs' Simpson's diversity index  $D^{39}$  across all levels of study.



**Figure 6.22.** Evolution of *R*<sup>2</sup> values for the association between HEIs' shares of students who are non-EU international and HEIs' *D* between 1995/96 and 2016/17.

<sup>&</sup>lt;sup>39</sup> As in chapter 5, I have excluded from the analysis those HEIs with less than 10 non-EU international students, as D is highly erratic when institutions have very small numbers. In the following section, where I fit an OLS regression model with splines to this research's data, universities with less than 10 non-EU first-year students have been given D sample mean values.

Figure 6.22 show two interesting features. First, it appears that, at the first degree level, this relationship has been almost negligible throughout the period under study, with some stronger – though modest– associations during the end of the first plateau period and the expansionary phase of the second Prime Minister's Initiative. This is consistent with chapter 5, where I showed that this explanatory variable did not have any explanatory power at the first degree level. Second, at the PGT level, the strength of this relationship was relatively weak until the expansionary phase of PMI2, shooting off during the Coalition policies' phase. This may be due to the significant reduction of the overall diversity that happened after the election of the Conservative-led coalition government, which saw a reduction of students coming from India and certain African countries that, those universities that were able to capitalise this growth among Chinese students have managed to achieve greater shares of students who are non-EU international. Finally, at the PGR level, we observe, as in other measures, more erratic patterns. However, the overall effect is that this relationship has remained relatively flat throughout the period under study.

# 5. Modelling the growth in the shares of non-EU international students in UK higher education institutions

In this section of this chapter, I test the hypothesis that the likelihood of an institution reaping a larger share of the growth of non-EU-international students during the two periods of rapid growth nationally is greater if they 1) are higher prestige institutions 2) are located in the capital or another major metropolitan area, 3) recruit a majority of students to business-related subjects, and 4) recruit students from a less diverse range of countries of origin. I also hypothesise that the likelihood of an institution suffering a larger decline in their shares of students who are non-EU international during the two plateau periods (between 2003-2007, and 2010-2016) is lower if they have the latter four characteristics.

However, unlike in the previous section, I do not test these hypotheses separately by exploring bivariate associations between these four drivers and this chapter's dependent variable –the percentage of students who are non-EU international across UK HEIs over time. Instead, I look at the proportion of the variance that each of the four drivers explain in the dependent variable when controlling for the other drivers. To do so, I use a series of multiple ordinary least squares (OLS) models which involve 'taking into account the correlations between independent variables, and assessing the [net] effect of each independent variable, when the [effects of the] other variables have been removed' (Miles and Shevlin 2001: 31).

These models also account for the fact that the growth in the shares of students who are non-EU international has been discontinuous. As shown in chapter 3 and in this chapter, the evolution of the percentages of students who are non-EU international has had intermittent phases of plateau, expansion and decline. Therefore, linear splines are used to estimate five separate slopes for the variable academic year, coinciding with the five policy phases identified in chapter 2. The first one corresponds to the plateau phase between 1995/96 and 1999/2000, the second one standing in for the expansionary period until 2003/04 coinciding with the first Prime Minister's Initiative, a third one representing the plateau period between 2003/04 and 2007/08, a fourth one corresponding to a renewed expansion period until 2010/11, and a final one representing an overall decline until 2016/17.

The modelling schedule in this section starts with a simple OLS model with the non-spline version academic year as the only explanatory variable, followed by a second simple OLS model replacing academic year by the period splines. This is done to confirm that the multiple slopes produced by the splines do a better job of explaining the evolution of shares of students who are non-EU international than academic year represented by a single slope. Thirdly, I include the four

main predictors in the model. Finally, each of the five splines for academic year is interacted with the four predicted drivers in turn. These interactions are important as they allow for the identification of the explanatory power of these four predicted drivers in periods of expansion and decline. This is particularly relevant when looking at the differences in growth rates in the shares of non-EU international students across institutional types. Here, I predict that in the period of decline after the introduction of the Coalition migration policies had a significant impact in the differences in growth rates between higher and lower prestige institutions, with higher prestige institutions not suffering any decline –and even experiencing growth– while lower prestige ones suffer a significant drop. I also predict that, as in chapter 5, the explanatory power of these models is especially high at the PGT level, and, to a more modest extent, at the first degree level. In contrast, these models are not expected to have much explanatory power at the PGR level. This is because these models are more relevant to levels of study which are more heavily marketised, , which in turn reinforces the 'economic and reputational distance' between HEIs (Brown and Carasso 2013: 134). The modelling schedule is run separately for first degree, PGT and PGR levels of study.

## 5.1. Empirical results: first degree

Table 6.5 presents the results of fitting a series of seven OLS models to the dependent variable representing the percentage of first-year first degree non-EU international students in UK higher education institutions. Beginning with the first model, where I fit a simple OLS model with a linear independent variable representing academic year, we observe a significant growth of the shares of students who are non-EU international in UK HEIs over the period 1995/96 to 2016/17. This model predicts that the share of students who are non-EU international in UK HEIs increased by 0.3 percent points every year. This simple OLS model explains 7 percent of the variation in the dependent variable, as shown at the bottom of the table under the name "R-squared". The second
column, showing the second model, now fits a model containing the period splines for the variable academic year. As expected, the second model shows that this growth was restricted to the expansionary phases of the first Prime Minister's Initiative –between 1999/2000 and 2003/04– and the second Prime Minister's Initiative –between 2010/11 and 2016/17. As shown at the bottom of the table, this model explains 8 percent of the variation in the dependent variable, which is a significant improvement over model 1.

The third model adds the four independent variables identified as having an effect on HEIs' capacity to recruit higher shares of non-EU international students, namely: 1) position in the status hierarchy of universities, 2) geographical location, 3) size of provision of higher education in business-related subjects, and 4) the diversity of the non-EU international student body. First, we observe that, when controlling for these four independent variables, the patterns of expansion and plateau remain almost unchanged, as shown in the coefficients for the five period splines. Second, controlling for academic year in the shape of period splines and the other predictors, the type of HEIs has a significant effect on HEIs' capacity to recruit higher shares of students who are non-EU international. In this sense, Golden triangle HEIs had shares of students who are non-EU international that were 11.8 percent points higher than post-1992 HEIs, 4.5 in the case of other Russell Group HEIs and 4.3 in the case of other non-Russell Group pre-1992 HEIs. Moreover, as this model controls for other predictor variables -including HEIs' location-, it suggests that the effect of HEI type cannot be attributed solely to the fact that 4 out of 6 Golden triangle universities are located in London. Third, the coefficients also show that HEIs located in London had higher shares of students who are non-EU international than those located outside a major metropolitan area -3.5 percent points higher. HEIs located in major cities other than London also had higher shares (0.6 percent points higher). Fourth, we observe that HEIs' shares of students who are non-EU international increase modestly -by 0.04 percent points- with each percentage point increase in their shares of non-EU international students undertaking business degrees. Finally, the last coefficient of the second model suggests that a percentage point increase in HEIs' diversity index

is associated with a decline of 0.02 percent points in its share of students who are non-EU international. This model has substantially more explanatory power than the previous two, explaining 29 percent of the variation in the dependent variable.

The fourth model adds a two-way interaction between HEI types and each of the five period splines. This interaction is designed to observe the differences in growth rates between each HEI type and the reference category (pre-1992 HEIs) at each academic year spline. In this fourth model, the coefficients shown in the period splines represent the increase in the dependent variable per year, specifically for the reference category of institutions founded after 1992. Here we observe that post-1992 HEIs experienced more modest growth during the expansionary phases of the first and second Prime Minister's Initiative, and a starker decline during the two plateau periods, than the sector average shown in the previous model. We also observe that the effect of the other four explanatory variables remain when controlling for the interactions between the period splines and HEI types. The section labelled "HEI type by period interactions" in table 6.5 show whether changes over time in the shares of student who are non-EU international differ across HEI types. There is only one significant difference in the coefficients between HEI types and the reference category (post-1992 HEIs): between other Russell Group HEIs and post-1992 HEIs during the expansionary phase of the second Prime Minister's Initiative. Between the academic years 2007/08 and 2010/11, an increase in academic year represented an increase of 1.56 (1.05 + 0.51) percent points in the share of students who were non-EU international in non-Golden triangle Russell Group universities.

These results partially support my hypothesis that higher prestige institutions experienced higher growth during expansionary periods and that lower prestige institutions suffered more decline during plateau periods. First, the fourth model described above shows that, regardless of the periods of expansion and plateau, higher prestige universities show significant higher shares of first-year first degree students who are non-EU international than lower prestige ones. Second, when looking at the interactions between the period splines and HEI types, we observe that, overall, higher prestige institutions show higher coefficients than post-1992 institutions across all period splines. Notwithstanding, these differences are not statistically significant but in one case, in the difference in coefficients between other Russell Group and post-1992 HEIs during the expansionary period of the second Prime Minister's Initiative. These results suggest that, with the exception of the latter case, post-1992 HEIs and the other HEI types have had similar growth rates for their shares of students who are non-EU international. However, as shown in the coefficients for HEI types without interactions, stark differences in these shares between higher and lower prestige HEIs have persisted.

Model 5 considers a two-way interaction between geographical location and each of the five period splines. In this case, the coefficients for the academic year splines in model 5 represent the increase in the dependent variable when academic year increases for the reference category which is HEIs located outside London or another major metropolitan area. These coefficients show that, for HEIs located outside London or another major metropolitan area, there is a significant increase in the dependent variable when academic year increases for the expansionary phases of the first and second Prime Minister's Initiative. Regarding the coefficients for the interactions, we observe two important features. First, that the differences in coefficients between HEIs located in London and other major city, and those located outside these are not significant. This suggests that the growth rates throughout the different period splines for HEIs with different geographical locations have been similar.

These results do not support my hypothesis that HEIs located in London and other major metropolitan areas have enjoyed higher growth in their shares of students who are non-EU international during expansionary periods and have suffered less decline during plateau periods. Instead, inequalities between institutions located in London and outside London when controlling for academic year and the other four predicted drivers have persisted over time without widening or narrowing to any significant degree.

Model 6 adds a two-way interaction between HEIs' percentage of students undertaking a degree in a business-related subject and the five period splines. In this model, the coefficients for the period splines represent the increase in the dependent variable when academic year increases for a hypothetical HEI with a sample average value on the percentage of its non-EU international students studying a business-related degree. The coefficients for the interactions represent the impact of a one-unit increase in the percentage of students in a given HEI undertaking a business-related degree on the annual change in the share of students who are non-EU international. In this model, we observe no significant interaction effects, except for during the expansionary phase of the second Prime Minister's Initiative, during which time a percentage point increase in the share of non-EU students undertaking a business degree was associated with a 0.02 percent points higher rate of growth in the percentage of students who were non-EU international.

This result partially supports my hypothesis that growth in the dependent variable is higher among those HEIs having a larger offering in business-related courses. First, we do not observe that decline in the dependent variable during the two plateau periods is correlated with a lower share of HEIs' non-EU international students undertaking a business degree. Second, we do observe a modest relationship between these two variables in the expansionary phase of the second Prime Minister's Initiative. However, as we observed in previous models, the coefficients for the main effects of the explanatory variable "% Intl studying business" indicate that, on average, an increase in the latter variable moderately increases the dependent variable.

Finally, model 7 adds a two-way interaction between a HEIs' diversity index (D) specifically in relation to their non-EU international student population and the five period splines. As in model 6, the coefficients for the main effects of the period splines are for a hypothetical HEI with a sample average D. The coefficients for the interaction of these two variables represent the change in the shares of students who are non-EU international when academic year increases that is explained by a unit increase in  $D^{40}$ . As shown in table 6.5, none of these interactions produce a significant coefficient, indicating that rates of growth in the share of students who are non-EU international is unrelated to the diversity of the international student body.

Regarding my last hypothesis, where I state that we expect to find larger growth during expansionary periods and smaller decline during plateau periods among less diverse HEIs, the results do not support it. However, as shown in previous models, throughout the period under study, HEIs with a higher *D* were shown to have lower shares of students who are non-EU international. This indicates that, over the entire period under considerations, less diverse HEIs had, on average, slightly larger shares of first-year first degree students who were non-EU international, although this does not help to explain growth patterns.

 $<sup>^{40}</sup>$  D is the probability that any two students randomly selected from a HEI will be from different countries. In this research, this probability is expressed as a percentage. Therefore, a unit increase in D represents an increase of one percent point in this probability.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Period 1995-2016	0.30***						
Period splines							
1995 – 1999		-0.11	-0.09	-0.04	-0.14	-0.12	-0.08
1999– 2003		0.67***	0.59***	0.47**	0.59***	0.60***	0.59***
2003 – 2007		-0.01	-0.02	-0.16	-0.04	-0.00	-0.02
2007 – 2010		0.86***	0.76***	0.51*	0.87***	0.72***	0.77***
2010 – 2016		0.02	0.01	-0.09	-0.07	0.01	0.00
HEI type (ref= post-1992)							
Golden Triangle			11.83***	8.24***	11.82***	11.81***	11.82***
Other Russell Group (RG)			4.45***	2.53	4.45***	4.43***	4.43***
Other non-RG pre-1992			4.32***	2.61*	4.32***	4.31***	4.35***
Location of HEI (ref=Other)							
London			3.46***	3.47***	3.32**	3.46***	3.47***
Other major city			0.59*	0.59*	-0.28	0.59*	0.62*
% Intl studying business			0.04***	0.04***	0.04***	0.06	0.04***
Intl students diversity index			-0.02**	-0.02**	-0.02**	-0.02*	-0.03
HEI type by period interactions							
Golden Triangle by 1995-1999				0.06			
Golden Triangle by 1999-2003				0.55			
Golden Triangle by 2003-2007				0.53			
Golden Triangle by 2007-2010				-0.04			
Golden Triangle by 2010-2016				0.69			
Other RG by 1995-1999				-0.08			
Other RG by 1999-2003				015			
Other RG by 2003-2007				-0.15			
Other RG by 2007-2010				1.05*			
Other RG by 2010-2016				0.39			
Other non-RG pre-1992 by 1995- 1999				-0.15			
Other non-RG pre-1992 by 1999- 2003				0.29			
Other non-RG pre-1992 by 2003- 2007				0.43			

Other non-RG pre-1992 by 2007- 2010				0.49			
Other non-RG pre-1992 by 2010- 2016				0.08			
Location by period interactions							
London by 1995-1999					-0.05		
London by 1999-2003					0.13		
London by 2003-2007					-0.20		
London by 2007-2010					-0.23		
London by 2010-2016					0.25		
Other major city by 1995-1999					0.16		
Other major city by 1999-2003					-0.08		
Other major city by 2003-2007					0.25		
Other major city by 2007-2010					-0.24		
Other major city by 2010-2016					0.10		
% business by period interaction							
% business by 1995-1999						0.00	
% business by 1999-2003						0.00	
% business by 2003-2007						-0.01	
% business by 2007-2010						0.02*	
% business by 2010-2016						0.00	
Diversity index by period interaction							
Diversity by 1995-1999							0.00
Diversity by 1999-2003							0.01
Diversity by 2003-2007							0.01
Diversity by 2007-2010							-0.02
Diversity by 2010-2016							0.00
Constant	4.14***	4.14***	2.55***	3.39***	2.80***	2.67***	2.50***
R-squared	0.074	0.079	0.287	0.310	0.288	0.288	0.288

 Table 6.5. Coefficients from OLS regression with spline predicting the share of non-EU international students at first degree level.

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### 5.2. Empirical results: postgraduate taught

Table 6.6 presents the results of fitting a series of seven OLS models to the dependent variable representing the percentage of first-year PGT non-EU international students in UK higher education institutions. As in the previous subsection, I first run a simple OLS model with the non-spline version of academic year. As shown in table 6.6, a unit increase in the variable academic year is associated with a 1.14 increase in the dependent variable. This model explains 17 percent of the variation in the dependent variable, as shown at the bottom of the table under the label "R-squared". In model 2, I fit a simple OLS model with the spline version of academic year. As expected, this model suggests that growth was higher during the expansionary phase of the first and second Prime Minister's Initiative (B=2.87 and B=1.86), lower during the first plateau period (B=1.14) and the sector experienced overall decline during the Coalition policies period (B=-0.74). As at the bottom of the table, this model explains 21 percent of the variable, indicating a significant improvement over a single linear expression of time for the entire period under consideration

The third model adds the four independent variables identified as having an effect on HEIs' capacity to recruit higher shares of non-EU international students. First, we observe that, when controlling for these four independent variables, the patterns of expansion and plateau only change moderately, as shown in the coefficients for the five period splines. Second, controlling for academic year in the shape of period splines and the other predictors, the type of HEI has a significant effect on HEIs' capacity to recruit higher shares of students who are non-EU international. In this sense, Golden Triangle HEIs had, on average during the period under study, shares of students who are non-EU international that were 18.2 percent points higher than post-1992 HEIs, 14.9 in the case of other Russell Group HEIs and 12.5 in the case of other non-Russell Group pre-1992 HEIs. Third, the coefficients also show that HEIs located in London and in other major metropolitan cities had higher shares of students who are non-EU international that metals are non-EU international than those located outside a major metropolitan area: 4.3 percent points higher for the former and 2.94 for

the latter. Fourth, we observe that HEIs' share of students who are non-EU international is slightly higher –by 0.11 percent points– when their shares of non-EU international students undertaking business degrees are higher. Finally, the last coefficient of the third model suggests that a percentage point increase in HEIs' diversity index is associated with a 0.32 percentage points reduction in an HEI's share of students who are non-EU international. This model has significantly more explanatory power than the previous two, explaining 43 percent of the variation in the dependent variable.

In model 4, I add a two-way interaction between HEI type and each of the five period splines. In this model, as in the previous subsection, the coefficients shown in the period splines represent the increase in the dependent variable when academic year increases for the reference category of HEI type, that is institutions founded after 1992. We observe that post-1992 HEIs experienced similar growth during the expansionary phases of the first and second Prime Minister's Initiative and similar slowing down of this growth during the first plateau period. However, we also observe that the decline in the dependent variable during the Coalition policies period was starker for these HEIs than the sector average shown in model 3. In this period from 2010 onwards, a unit increase in academic year was associated with a -1.19 percentage point decline in the dependent variable for post-92 universities. We also observe that the effect of the other four explanatory variables remain when controlling for the interactions between the period splines and HEI types. The section labelled "HEI type by period interactions" in table 6.6 show how trends in the shares of students who are non-EU international vary by HEI type. In the case of Golden Triangle institutions, no period spline appears to yield significantly different coefficients to those from post-1992 HEIs, with the exception of the period comprising the policies implemented by the Coalition government. During this phase, while post-92 universities experienced an average annual decline of 1.19 percentage points, Gold Triangle universities continued to enjoy positive growth rates of around 1.1 percentage points on average (-1.19 + 2.28). Similarly, non-Golden Triangle Russell

Group universities avoided the decline experienced by post-1992 universities, albeit enjoying only negligible growth during this period of 0.15 percentage points annually on average (-1.19 + 1.34)

This model explains 44 percent of the variation in the dependent variable.

These results partially support my first hypothesis. The coefficients for the interactions between HEI type and the period splines suggest that growth rates in the dependent variable were not significantly different between the reference category of HEI types (post-1992 HEIs) and the other types for the first four period splines. However, since 2010/11, the growth rates diverged. Indeed, after the implementation of the Coalition government's student migration policies, the shares of students who are non-EU international in post-1992 universities significantly decreased, while this was not the case in Golden Triangle and other Russell Group universities. In the former, HEIs kept experiencing growth, while the latter did so more modestly.

Model 5 inserts a two-way interaction of location of HEI and the five period splines. As in model 4, the coefficients for the period splines without interactions represent the increase in the dependent variable for a unit increase in academic year for HEIs in the reference category, that is, located outside London and other major metropolitan areas. In this case, we observe that the coefficients tend to be smaller than the sector average, which appears in model 3. As with post-1992 institutions, HEIs located outside London and other major metropolitan areas in model 3. As with post-1992 institutions, HEIs located outside London and other major metropolitan areas suffered a higher decline in their shares of non-EU international students during the Coalition government period, decreasing by 1.1 percent points for each unit increase in academic year. In contrast, HEIs located in London did not experience this decline during the Coalition government period, and instead benefitted from continued growth albeit at a very modest level of around 0.12 percent points (-1.10 + 1.22) per year.

As with hypothesis 1, these results partially support hypothesis 2. Universities located in London and other major metropolitan areas do not appear to have higher growth rates than HEIs located elsewhere during the two expansionary periods and the first plateau period. However, during the Coalition government period, HEIs located in London saw their shares increase moderately, or at least remain stable, while HEIs located elsewhere suffered a significant decline.

Model 6 includes two-way interactions between HEIs' percentages of non-EU international students undertaking a business degree and the five period splines. As shown in models 3 to 5, on average for the period under study, a unit increase in the percentage of non-EU students enrolled in a business degree represented a 0.11 percent increase in HEIs' shares of students who are non-EU international. However, when we look at the interaction terms, we do not observe any significant variation in the dependent variables that can be related to the growth in the percentages of non-EU international students studying a business degree.

These results do not support hypothesis 3, in which I state that growth in HEIs' shares of non-EU international students is higher among HEIs with a larger provision of their education to non-EU international students that is business based. They also did not experience significantly less decline during plateau periods. Notwithstanding, on average throughout the period under study, HEIs with higher percentages of non-EU students undertaking a business-related degree tended to have higher shares of students who were non-EU international.

Finally, model 7 adds a two-way interaction between HEIs D and each of the five period splines. As in model 6, the coefficients for the main effects of the period splines are for a hypothetical HEI with a sample average D. The interaction terms of these two variables represent the annual change in the share of students who are non-EU international associated with a unit increase in an HEI's D. As shown in table 6.6, these interactions produce two significant coefficients, one during the first plateau period and a second one during the Coalition government's policies. The coefficient for the interaction between D and the period spline between 2003/04 and 2007/08 indicates that a unit increase in D was associated with an average annual decrease in the dependent variable of 0.06 percent points over and above the decline occurring in the sector in general. Likewise, between 2010-2016, more diverse HEIs saw their shares of students

who were non-EU international decline more rapidly than the sector average, by an additional 0.12 percentage points.

Regarding my last hypothesis, where I state that we expect to find larger growth during expansionary periods and smaller decline during plateau periods among less diverse HEIs, the results only support it partially. It appears that, during the two periods of plateau, less diverse HEIs appear to experience less severe declines in their shares of students who are non-EU international. This could be due to two main reasons: 1) HEIs targeting their recruitment to a narrower range of countries may have been more effective at maintaining their shares of non-EU international students, and 2) the decrease in diversity experienced in the sector as a whole, as explained in section 4 of this chapter, since the introduction of the Coalition government policies may have particularly impacted those universities that are particularly successful at recruit higher shares of students who are non-EU international. For instance, the increase in Chinese students experienced since 2010/11 that may have compensated the decline in Indian students may have been capitalised by those universities that are better placed at recruiting higher shares of non-EU international students.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Period 1995-2016	1.14***						
Period splines							
1995 – 1999		0.04	0.18	0.46	0.21	0.26	0.04
1999– 2003		2.87***	2.12***	2.26***	2.06***	2.10***	2.56***
2003 - 2007		1.14***	1.14***	1.38***	0.94*	1.14***	0.75*
2007 – 2010		1.86***	1.29***	1.25*	1.70***	1.26***	1.32**
2010 - 2016		-0.74***	-0.74***	-1.19***	-1.10***	-0.73***	-0.85***
HEI type (ref= post-1992)							
Golden Triangle			18.21***	22.76***	18.13***	18.21***	17.86***
Other Russell Group (RG)			14.99***	15.44***	15.11***	15.00***	14.16***
Other non-RG pre-1992			12.46***	16.74***	12.47***	12.46***	12.07***
Location of HEI (ref=Other)							
London			4.31***	4.17***	5.76	4.32***	4.21***
Other major city			2.94***	2.87***	-0.20	2.94***	2.84***
% Intl studying business			0.11***	0.11***	0.11***	0.74	0.11***
Intl students diversity index			-0.32***	-0.30***	-0.32***	-0.32***	-0.15
HEI type by period interactions							
Golden Triangle by 1995-1999				-0.06			
Golden Triangle by 1999-2003				-1.33			
Golden Triangle by 2003-2007				-1.14			
Golden Triangle by 2007-2010				-0.41			
Golden Triangle by 2010-2016				2.28*			
Other RG by 1995-1999				-0.39			
Other RG by 1999-2003				0.11			
Other RG by 2003-2007				-0.82			
Other RG by 2007-2010				1.44			
Other RG by 2010-2016				1.34*			
Other non-RG pre-1992 by 1995- 1999				-0.77			
Other non-RG pre-1992 by 1999- 2003				-0.08			
Other non-RG pre-1992 by 2003- 2007				-0.36			

Other non-RG pre-1992 by 2007- 2010				-0.35			
Other non-RG pre-1992 by 2010- 2016				0.62			
Location by period interactions							
London by 1995-1999					-0.09		
London by 1999-2003					-0.00		
London by 2003-2007					-0.25		
London by 2007-2010					-1.48		
London by 2010-2016					1.22*		
Other major city by 1995-1999					-0.06		
Other major city by 1999-2003					0.42		
Other major city by 2003-2007					096		
Other major city by 2007-2010					-0.26		
Other major city by 2010-2016					0.32		
% business by period interaction							
% business by 1995-1999						0.01	
% business by 1999-2003						-0.00	
% business by 2003-2007						-0.01	
% business by 2007-2010						0.01	
% business by 2010-2016						-0.00	
Diversity index by period interaction							
Diversity by 1995-1999							0.02
Diversity by 1999-2003							-0.04
Diversity by 2003-2007							-0.06*
Diversity by 2007-2010							0.02
Diversity by 2010-2016							-0.12*
Constant	13.29***	14.38***	6.97***	5.43***	7.42***	6.68***	7.18***
R-squared	0.17	0.21	0.43	0.44	0.44	0.43	0.44

 Table 6.6. Coefficients from OLS regression with spline predicting the share of non-EU international students at PGT level.

#### 5.3. Empirical results: postgraduate research

Table 6.7 presents the results of fitting a series of seven OLS models to the dependent variable representing the percentage of first-year PGR non-EU international students in UK higher education institutions. This section follows the same modelling schedule as at first degree and PGT levels. First, I fit a simple regression model with a linear version of academic year, which yields a coefficient of B=0.5 (R-squared=0.11). The second model replaces the linear version of academic year by five period splines. In the case of first-year PGR students, the only significant growth in the average shares of students who are non-EU international in UK HEIs happened during the expansionary period of the first Prime Minister's Initiative. During this period, a unit increase in the period between 1999/2000 and 2003/04 was associated with an increase of 1.58 percent points in the dependent variable. This model explained 14 percent of the variation in the dependent variable.

Model 3 shows that, when controlling for all independent variables and period splines, there have been significant differences in the shares of students who are non-EU international between HEI types. This share in Golden Triangle institutions was 5.63 percent points higher than the reference category (post-1992 universities), 2.57 in the case of non-Golden Triangle Russell Group HEIs, and 4.71 for non-Russell Group pre-1992 HEIs. Regarding the geographic location of HEIs, London does not appear to have an effect on the dependent variable, while those HEIs located elsewhere had shares of students who are non-EU international 1.72 higher than the reference category (HEIs not located in a major metropolitan city). Finally, HEIs with higher percentages of their non-EU student body undertaking a business degree and with a less diverse non-EU student body tend to have, on average throughout the period under study, higher shares of first-year PGR students who are non-EU international. This model explains 17 percent of the dependent variable.

Model 4 adds to model 3 a two-way interaction between HEI types and each period spline. The coefficients of the period splines represent the increase in the dependent variable when academic year increases for the reference category of HEI type, that is institutions founded after 1992. We observe that, on average, these institutions experience stark decline during the first plateau period (B=-2.87) and more modest decline during the Coalition policies' period (B=-0.88). However, it shows significant increase for the expansionary phase of the second Prime Minister's Initiative (B = 4.09). These results are potentially influenced by the highly erratic patterns that post-1992 institutions show in the evolution of their shares of first-year PGR students who are non-EU international, as shown in section 5 of this chapter. This is due to the fact that the number of post-1992 HEIs with more than 100 FTE first-year PGR students -the ones included in this analysis- is relatively small, and this number varied substantially year-to-year as the amount of FTE students in these HEIs fluctuated below and above the 100 students' mark. This erratic behaviour may also explain the coefficients for the interaction terms. In this sense, the shares of students who are non-EU international in Golden triangle institutions increased by 0.11 percent points (-3.98 + 4.09) for a unit increase in academic year, a growth rate 3.98 percent points less than post-1992 institutions. Other Russell Group institutions experienced negative growth during the expansionary phase of the second Prime Minister's Initiative, B=-0.91 (-5.0 + 4.09). However, these same institutions showed, during the Coalition government policies, a coefficient B=1.46, meaning that their shares of non-EU international students increased by 0.58 percent points as academic year increased one unit (1.46 + -0.88). In the case of non-Russell Group pre-1992 universities, these show a significant coefficient in the period between 2003/04 (B=3.55), 2007/08 and 2010/11 (B=-4.61) and between 2010/11 and 2016/17 (B=1.07). Again, these differences may reflect the erratic patterns shown in section five of these patterns. In any case, these results make hypothesis 1 inconclusive at the PGR level.

Model 5 adds a two-way interaction between the location of HEIs and each period spline. In this case, as shown in the interaction terms, the only significant difference in the coefficients is between "London" and "located elsewhere" during the Coalition policies' period. During this period, the shares of non-EU international students of HEIs located in London increased by 1.07 percent points per academic year in contrast to no growth for the sector as a whole (-0.20 + 1.27). These results partially support my second hypothesis.

Model 6 includes two-way interactions between HEIs' percentages of non-EU international students undertaking a business degree and the five period splines. As shown in models 3 to 5, on average for the period under study, a unit increase in the percentage of non-EU students enrolled in a business degree was associated with a 0.13-0.14 percentage point increase in an HEI's share of students who are non-EU international. When we look at the interaction terms, we observe two particularly significant coefficients. First, during the expansionary phase of the second Prime Minister's Initiative, HEIs in which non-EU international students were more concentrated in business degree programmes saw their shares of students who were non-EU international increase at a faster rate, at 0.17 percentage points for every one percentage point increase in the share studying business. Second, during the Coalition government period, the share of students who were more highly concentrated on business programmes (B=-0.05).

These results partially support hypothesis 3, but also contradicts it. During the expansionary phase of the Prime Minister's Initiative, universities with higher shares of their first-year PGR non-EU international students doing a research degree in business, experienced greater growth. Notwithstanding, during the last period spline, this relationship was reversed.

Finally, model 7 adds a two-way interaction between HEIs' diversity index (D) related specifically to their non-EU international student populations and the five period splines. As shown in table 6.7, none of these interactions produce a significant coefficient, suggesting that HEIs' D are not predictive of changes in the dependent variable over time. Regarding my last hypothesis, where I state that we expect to find larger growth during expansionary periods and smaller decline during plateau periods among less diverse HEIs, the results do not support it. However, as shown in the coefficient for the main effects of this explanatory variable, throughout the period under study, an increase of a percent point in HEIs' *D* was correlated with a moderate decrease in HEIs' shares of students who are nom-EU international. This suggests that, over the period at stake, less diverse HEIs had, on average, slightly larger shares of first-year first degree students who were non-EU international, although this does not explain growth patterns.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Period 1995-2016	0.50***						
Period splines							
1995 – 1999		0.55	0.48	0.95	0.73	0.64	0.12
1999– 2003		1.58***	1.40***	3.14**	1.19**	1.40***	1.50***
2003 – 2007		0.22	0.25	-2.87*	0.18	0.39	0.28
2007 – 2010		-0.04	-0.07	4.09***	0.13	-0.28	-0.16
2010 – 2016		0.19	0.13	-0.88	-0.20	0.11	0.20
HEI type (ref= post-1992)							
Golden Triangle			5.63***	17.05***	5.50***	5.96***	5.62***
Other Russell Group (RG)			2.57***	7.13	2.50**	2.58**	2.66**
Other non-RG pre-1992			4.71***	8.77*	4.61***	4.97***	4.82***
Location of HEI (ref=Other)							
London			-0.37	-0.41	5.19	-0.46	-0.25
Other major city			1.72**	1.79**	-0.30	2.17***	1.81**
% Intl studying business			0.13***	0.13***	0.14***	-0.20	0.13***
Intl students diversity index			-0.16*	-0.15*	-0.15*	-0.18**	-0.83*
HEI type by period interactions							
Golden Triangle by 1995-1999				-1.56			
Golden Triangle by 1999-2003				-2.07			
Golden Triangle by 2003-2007				2.55			

Golden Triangle by 2007-2010	-3.98*	
Golden Triangle by 2010-2016	1.05	
Other RG by 1995-1999	-0.53	
Other RG by 1999-2003	-1.66	
Other RG by 2003-2007	3.35*	
Other RG by 2007-2010	-5.00***	
Other RG by 2010-2016	1.46*	
Other non-RG pre-1992 by 1995- 1999	-0.35	
Other non-RG pre-1992 by 1999- 2003	-1.93	
Other non-RG pre-1992 by 2003- 2007	3.55**	
Other non-RG pre-1992 by 2007- 2010	-4.61***	
Other non-RG pre-1992 by 2010- 2016	1.07*	
Location by period interactions		
London by 1995-1999	-1.75	
London by 1999-2003	0.70	
London by 2003-2007	-0.28	
London by 2007-2010	-0.16	
London by 2010-2016	1.27*	
Other major city by 1995-1999	0.08	
Other major city by 1999-2003	0.35	
Other major city by 2003-2007	0.44	
Other major city by 2007-2010	-0.70	
Other major city by 2010-2016	0.43	
% business by period interaction		
% business by 1995-1999	0.0	)4
% business by 1999-2003	-0.0	)1
% business by 2003-2007	-0.(	)2
% business by 2007-2010	0.17	***
% business by 2010-2016	-0.0	5*

Diversity index by period interaction							
Diversity by 1995-1999							0.18
Diversity by 1999-2003							-0.05
Diversity by 2003-2007							-0.06
Diversity by 2007-2010							0.05
Diversity by 2010-2016							0.05
Constant	23.86***	22.06***	18.92***	14.39***	18.71***	17.52***	20.20***
R-squared	0.11	0.14	0.17	0.19	0.18	0.20	0.17

Table 6.7. Coefficients from OLS regression with spline predicting the share of non-EU international students at PGR level.

### 6. Conclusion

In this chapter, I have explored how the shares of students who are non-EU international in UK HEIs have varied, over the course of the last two decades, in relation to institutional characteristics –institutional reputation and geographical location– and proxy measures that may capture the strategies that HEIs pursue to make their provision more attractive to this population –their education offering in business degrees and recruiting students from a narrower range of countries. To do so, I have addressed the following hypotheses: the likelihood of an institution reaping a larger share of the growth of non-EU-international students during the two periods of rapid growth nationally is greater, and the impact of plateau periods is lower if they

- 1) are higher prestige institutions
- 2) are located in the capital or another major metropolitan area,
- 3) recruit students to a less diverse range of subject areas,
- 4) recruit students from a less diverse range of countries of origin.

This study has partially proven the hypotheses above. First, supporting what I have already said in chapter 5, I have shown that inequalities between HEIs in terms of their shares of students

who are non-EU international have persisted over the past 22 years, particularly at first degree and PGT levels of study. However, the growth in these shares over the period under study have been similar across all HEI types, while these inequalities have persisted. With one exception: the period coinciding with the tightening of student visa rules introduced by the Conservative-led coalition government. In this period and at the PGT level, as shown the OLS modelling section of this chapter, Golden Triangle and Russell Group institutions have managed to continue growing, while HEIs at the bottom of the hierarchy –particularly post-1992 HEIs– have suffered a significant loss in their shares of students who are non-EU international. This results support what many commentators have been suggesting about the potential impact of the set of policies introduced by the two successive Conservative governments since 2010. Moreover, historically, this is not an outlier. As shown in chapter 2, Hilary Perraton already suggested that the tightening of migration requirements since the 1962 Commonwealth Immigrants Act 'had a pronounced effect on those who came with the intention of combining work and study' (Perraton 2014: 94).

Furthermore, the results presented in this chapter also support the theoretical framework put forward by Marginson (Marginson 2006, 2008) –explained in chapter 3– in which he applies Bourdieu's concept of the 'field of power' (Bourdieu 1993), within which exists it's a polarity between 'the elite subfield of restricted production, and the subfield of large-scale mass production tending towards commercial production' (Marginson 2008). He argues that HEIs are more or less autonomous in relation to 'governments, market forces and both together' (ibid.) depending on their position within global and national hierarchies. First, as shown in section 4 of this chapter, Golden Triangle HEIs, which belong to what Marginson calls 'the Global Super-league' (ibid.), show a relatively stable upward pattern in their growth of shares of students who are non-EU international, suggesting that they are relatively autonomous to UK policy changes and to global flows of student mobility. Followed by the Global Super-league, we find 'Elite [...] national research universities with strong cross-border roles' (ibid.), universities whose description fits quite well those institutions in the Russell Group outside of the Golden Triangle. These HEIs, as I have shown in this chapter, have been able to grow their shares of students who are non-EU international, sometimes in spite of restrictive policy environments, particularly at the PGT level. However, the fact that they appear somewhat responsive to policy environments suggest that their level of heteronomy to the government and the market, and both together is higher than in Golden Triangle institutions. Finally, among post-1992 universities, we see a combination of what Marginson calls 'Teaching-focused export universities' and 'Non-profits without global agendas', HEIs that cater to local populations –sometimes almost exclusively– and that sometimes become 'lesser status non-profit universities, commercial players in global market: lower cost/quality foreign education at scale' (ibid.: 306). This subset of universities is particularly vulnerable to restrictive policy environments, as I have shown in this chapter.

I have also shown that the geographical location of HEIs, which is combined with their reputation in terms of being attractive to mobile students (Prazeres et al. 2017), can explain HEIs' resilience in particularly restrictive policy environments, particularly at the PGT level. In section 6.2 of this chapter, I have shown how London HEIs, when controlling for other explanatory variables, did not see their shares of students who are non-EU international decrease, as in other geographical locations. In the latter section I have also shown that, while HEIs with a larger provision of business-related courses to non-EU international students tended to have larger shares of students who are non-EU international students tended to have larger shares of students who are non-EU international, this variable does not explain why certain universities grew more than others.

Finally, I have shown that, again at the PGT level, the diversity of HEIs' non-EU student body help us explain how much HEIs' shares of students who are non-EU international have grown. As explained in section 3, the overall decline of diversity in the sector since 2010/11 has been caused by a decline of Indian students and a disproportionate growth of students coming from China, mainly caused by the fact that Indian students appear to be more sensitive to UK student migration policy environments (MAC 2018). This, together with the fact that Chinese students appear to be more attuned to UK national hierarchies (Cebolla-Boado et al. 2018) may have caused that better-resourced, more prestigious universities have been able to capitalise on this growth.

## Conclusion

### 1. Introduction

In this thesis, I have made several contributions to the literature concerning non-EU international student mobility to UK higher education and existing resource and prestige inequalities between institutional types. First, this study presents the first systematic longitudinal analysis of recruitment patterns of non-EU international students in UK HEIs in relation to UK policy developments, and political and socioeconomic changes elsewhere. I have shown that, in the past 22 years, the numbers of incoming non-EU international students to UK HEIs have either grown or stagnated coinciding with policy environments that sought to either encourage or restrict this kind of mobility. Moreover, I have also shown that political and socioeconomic changes elsewhere can also affect the shape these patterns take. Second, I have provided substantial new evidence regarding the drivers that may explain the uneven distribution of non-EU international student across UK HEIs, an issue that had been previously identified by several researchers (cf. Cebolla-Boado, Hu, and Soysal 2018; Marginson 2018; Findlay 2011; Machin and Murphy 2017). Moreover, I have examined how the explanatory power of these drivers has changed over time. In particular, my empirical analysis demonstrates that UK institutional hierarchies are critical to understanding the uneven distribution of non-EU international students -when institutional size is factored in- across UK HEIs and, at the first degree and PGT levels, differing growth rates in distinct policy environments. Finally, I have framed my findings theoretically using the Bourdieusian (Bourdieu 1993) concept of 'field of power' as developed by Marginson (2008), defined as 'a configuration of positions comprising agents (individuals, groups of actors, institutions) struggling to maximize their position. Conversely, agents are defined by their relational position within the field's distribution of capital (resources conferring power or status)

and from which they derive properties irreducible to intrinsic characteristics of the agents themselves' (Maton 2005: 689; cf. Bourdieu and Wacquant 1992). UK higher education institutions –the agents within this field– compete for capital available in the form of fees paid by non-EU international students and the symbolic prestige attached to having a highly internationalised student body.

This concluding chapter aims to review this thesis' key findings in light of my research questions and to discuss their implications in terms of policy and sociological theory. First, I discuss the relationship between policy-making concerning non-EU international students and recruitment patterns of non-EU international students. Second, I review one of this thesis' key findings: the strong association between levels of non-EU international student recruitment by individual HEIs and their position within UK institutional hierarchies. In particular, I look at the persistent inequalities that exist between institutional types regarding their capacity to recruit high levels of non-EU international students and consider how these inequalities are exacerbated in policy contexts that seek to restrict this type of mobility. Third, I explore how the proxy measures I have used to capture the strategies that UK HEIs may pursue to attract more non-EU international students vary across institutional types, discussing, theoretically, how the observed patterns can be explained by understanding UK higher education as a field of power. Fourth, I offer a prediction of what the future may look like in terms of non-EU international student recruitment considering the geopolitical tensions between US and China recent policy change; the reintroduction of the two-year post-study work visa; and Brexit. Finally, I discuss areas of further research that I intend to address throughout my academic career.

# 2. The relationship between policy environments and patterns of recruitment of non-EU international students

In chapter 2, I developed a periodisation of non-EU international student recruitment between 1995/96 and 2016/17 taking into account policy changes concerning non-EU international students, and socioeconomic and political developments elsewhere. I have done so drawing from Sylvie Lomer's (2017) work on policy discourses that had this subset of students as their main object. In her research, Lomer groups UK policies implemented between 1999 and 2013 in three main chronological groups, coinciding with three different policy approaches to international student recruitment -a summary of these can be found in chapter 2. I offer an extended and nuanced periodisation by incorporating the empirical analysis of data on non-EU international student recruitment in UK HEIs and by extending the period at stake from 1995/96 to 2016/17. First, I have shown that between 1995/96 and 1999/00, the numbers and shares of students who are non-EU international remained mostly flat, coinciding with a period in which non-EU international students were virtually absent from policy-making discourses (ibid.) This situation changed in 1999/00, when the sector experienced a sudden increase of non-EU students entering UK higher education. This growth coincided with the first Prime Minister's Initiative (PMI1), which set recruitment objectives and included, inter alia, simplified visa application processes, increased benefits for non-EU international students and substantial public investment in branding and marketing (ibid.). This growth came to a halt after 2003/04, which may have been caused by the accession to the EU of 10 new countries (Dedman 2009) and a particularly weak Chinese yuan in relation to the British pound (OFX 2019). This situation persisted until 2007/08, a year after the introduction of the second Prime Minister's Initiative (PMI2), which represented the continuation of PMI1, setting again recruitment targets, but with a 'more nuanced understanding of the education marketplace' (Lomer 2017: 58). In this regard, the PMI2 sought to diversify the countries that sent students to the UK and planned to increase the number of partnerships with third countries (DTZ 2011). Finally, I have observed empirically that since the

election of the Conservative-led coalition government in 2010, which advocated restrictions in issuing visas to non-EU international students (The Conservative Party 2010), the numbers and shares of incoming students who were non-EU international stagnated, and in some cases, decreased.

There are two important conclusions to be drawn from the analysis put forward in chapter 2. First, while it is an almost impossible task to elucidate the causal pathways at play in the relationship between policy inputs -- in this case, 'intentions or actions or more likely a mixture of the two' (Page 2008: 210) that seek to regulate who comes to the UK to study higher education and how- and the numbers of incoming non-EU international students, it appears to be the case that policy milieus that seek to restrict or facilitate international student mobility have a marked effect on demand for UK higher education. In particular, those policies that make the visa application process more tedious and expensive, and offer less benefits than other high-demand countries seem to have a detrimental effect on recruitment patterns (Levatino et al. 2018). Second, I have also shown that socioeconomic and political changes elsewhere -such as less favourable economic conditions in students' countries of origin- can have an equally negative impact on recruitment, even when policy environments in the host country are favourable. This was certainly the case between the academic years 2003/04 and 2007/08. Nevertheless, as I have shown in chapter 6, the impact of the reduction in the numbers of incoming non-EU international students has not been borne equally across the sector. In this sense, universities regarded as more prestigious have been able to maintain recruitment levels while lesser-status HEIs have suffered significant losses.

## 3. Institutional hierarchies, positional advantage and the recruitment of non-EU international students

This thesis' empirical chapters have provided new substantial evidence regarding the factors, drawn from the literature, that may explain the uneven distribution of non-EU international students across HEIs. Namely, I have modelled HEIs' shares of students who are non-EU international using the following explanatory elements: 1) institutional prestige (Findlay 2011; Tannock 2018); 2) geographic location (Prazeres et al. 2017); and 3) proxy measures that may capture institutional strategies to make their provision more attractive to non-EU international students: increased provision of courses in high-demand subjects and targeted recruitment drives in high-demand countries (Findlay, McCollum, and Packwood 2017). By using multiple regression techniques, I have been able to look for the net effects of each of these factors, and it emerged that institutional hierarchies have a particularly high effect in shaping HEIs' shares of students who are non-EU international, when controlling for other factors, especially at the first degree and postgraduate taught levels. The more limited effect of institutional prestige on recruitment to postgraduate research programmes partly reflects the fact that comparatively few lower prestige institutions are operating in this sub-field.

In my empirical analysis, I have shown that there are substantial and persistent inequalities in the shares of students that are non-EU international between HEIs based on their position in UK institutional hierarchies. Moreover, I have also shown that lesser-status HEIs –particularly those that received their university title after 1992– suffered an important reduction of their shares of students who are non-EU international in the Conservative-led coalition government period 2010-2016, especially at the postgraduate taught level. In chapter 6, I have shown that in the model with the most explanatory power, post-1992 HEIs saw their shares of non-EU international student decline, on average, by 1.19 percentage points annually between 2010 and 2016 when controlling for the other explanatory variables. In contrast, the growth patterns in the shares of students who are non-EU international in UK HEIs belonging to the 'Global Super-league' (Marginson 2008) –

here operationalised as the so-called Golden Triangle (Wakeling and Savage 2015)– appear to be more stable than in other institutional types. Golden Triangle universities in fact saw their postgraduate taught international student populations continue to grow, rather than decline, during the period 2010-2016.

These findings have different implications. First, the differences in shares of students who are non-EU international across institutional types feeds into longstanding resource and prestige disparities between UK HEIs. As explained in chapter 1, fees from non-EU international students, which tend to be higher than those paid by their domestic counterparts, represent a critical source of funding in a context of progressive reductions in public investment in higher education. Thus, it is reasonable to think that those HEIs with higher shares of non-EU international students are better resourced. Moreover, as explained in chapter 1, higher-prestige universities tend to charge higher fees to non-EU international students, reinforcing these inequalities in access to resources. Finally, non-EU international students are also perceived to signal institutional prestige, which is ultimately reflected in two influential global university rankings –Times Higher Education and QS–, which include the shares of students who are international in their calculation of institutional scores.

These results, although novel, are not surprising. As suggested by Marginson, higher education is a 'positional good' (Hirsch 1977; in Marginson 2006: 3), and although the 'positional aspect' of HEIs 'is not the only consideration in the minds of prospective students' is probably the most important one (ibid.). In this regard, 'the acid test is that when faced by choice between a prestigious university with known indifference to undergraduate teaching, and a lesser institution offering better classroom support, nearly everyone opts for prestige' (ibid.). The relevance of the positional dimension of universities in students' decision-making processes is not only found among non-EU international students but also among UK-based students. For instance, since 2015/16, when the government abolished the cap on undergraduate student numbers –meaning

that universities could recruit as many UK-based undergraduate students as they liked (Willetts 2017: 86)– 'the least selective universities [lost] out in the domestic recruitment race to more prestigious rivals in recent years' (Morgan 2018). Thus, it appears that in a policy context in which universities are encouraged to compete for students, where students compete for the places that 'offer better social status and lifetime opportunities' (Marginson 2006: 3), and in which funding is tied to the fees students bring with them –in the form of a tuition loans-based consumer market in the case of domestic students and a fully marketized non-EU international consumer market—there are winners and losers. As argued by Croxford and Raffe:

'Market-led policies, such as those currently pursued in England, may have unintended consequences if institutions are differentiated in a hierarchy linked to status and positional advantage. Education markets tend to reinforce academic hierarchies, rather than encourage institutions to compete on the quality and relevance of their programmes, markets may simply strengthen the position of institutions with existing reputational advantage' (Croxford and Raffe 2015: 1626).

This strengthening of existing reputational advantage is translated into the existence of resource and prestige disparities, in which the recruitment of non-EU international students plays a relevant role. This, in turn, has been labelled as a 'chronic issue of inequality' (CLASS 2019: 7) and a barrier to creating more equal opportunity through higher education (Marginson 2019). It is argued that a highly stratified sector, the upper echelons of which tend to be dominated by the middle and upper classes 'too often to be compatible with the ideology of merit' (Marginson 2006: 6), impacts equity in higher education. Thus, any resource contributing to inequalities between universities and reproducing this stratification is also potentially affecting equality of opportunity.

Second, these results are highly sociologically relevant, in terms of understanding the behaviour of institutions within the 'field of power' of UK higher education (Bourdieu 1993; Marginson 2008). In this field, agents –here UK HEIs– compete for resources –in this case non-EU international students– and the outcome of this competition as well as the way they engage in it is shaped by their position within this field. As argued by Marginson, the field of higher education is structured around two opposite poles. On the one hand, we have institutions that are highly heteronomous to the dynamics shaping the field –that is Government policies and the market. On the other hand, we have HEIs that are highly autonomous, whose 'agency freedom is enhanced by the globalisation of knowledge and their pre-eminence displayed in the web, global university rankings and popular cultures' (ibid.: 305). This theoretical framework allows us to understand the patterns described in chapters 5 and 6. On the one hand, the demand for higher education at post-1992 universities from non-EU international students is highly sensitive to the conditions in which these HEIs operate –that is, for instance, student migration policies– and thus highly heteronomous. However, as shown in chapter 6, the shares of students who are non-EU international –and their growth patterns– in Golden Triangle universities appear to be unaltered even during less favourable conditions.

### 4. The field of higher education and institutional strategies

The positional characteristics of HEIs in the field of UK higher education does not only shape their outcomes in the competition game for non-EU international students. It may be argued that it also shapes the way institutions behave within this field in order to reap the potential benefits from participating in it. I have shown, both in chapters 5 and 6, that HEIs with a larger provision of students in high-demand subjects –such as business, law and economics– tend to have higher shares of students who are non-EU international, a relationship that is strongest at the postgraduate taught level. I have also shown that, at this level of study, those universities that have less diverse non-EU international student bodies also tend to have higher shares of this subset of students. Longitudinally, I have also shown that, at the postgraduate taught level, those universities

with less diverse non-EU international student bodies showed higher growth rates in their shares of students who are non-EU international, particularly after the election of the Conservative-led coalition government. This, in turn, could signal that, as a general rule and fortuitously in a context of stagnation, certain universities seek to recruit students from a narrower range of countries where there is a high demand for UK higher education (cf. Findlay, McCollum, and Packwood 2017). However, these strategies are not pursued equally by all types of institutions. Some HEIs are more likely than others to engage in these commercial practices.

This fits rather well the notion that HEIs' position in the field of higher education is interrelated with 'the position-taking strategies they select' (Marginson 2008: 307). As argued by Marginson, drawing from Bourdieu's (1993) work:

'Position-taking is the 'space of creative works' [(in Bourdieu 1993: 39)]. This is not an open-ended free-wheeling creativity. Only some position-takings are possible, identified by agents as they respond to changes in the settings and the moves of others in the competition game. Agents have a range of possible 'trajectories', the succession of positions occupied by the same agent over time, and employ semi-instinctual 'strategies' to achieve them. Agents respond in terms of their 'habitus', their acquired mix of beliefs and capabilities, and in particular their 'disposition' that mediates the relationship between position and position-takings [(ibid.: 61-73)]' (Marginson 2008: 307).

Interestingly, as shown in chapter 5, the UK HEIs that are more likely to engage in the strategies identified in chapter 3 –that is 1) capitalising on London's appeal by setting up a satellite campus there; 2) having a larger provision of high-demand subjects; and 3) recruiting from a narrower range of countries– are those belonging to what Marginson calls the 'Elite non U.S. national research universities with strong cross-border roles' (ibid.: 306), operationalised in the

context of this thesis as non-Golden Triangle universities belonging to the Russell Group. These universities are more likely to have a satellite campus in London, have higher shares of their postgraduate students undertaking a degree in a high-demand subject (the institutional average is 50.4 percent), and a substantially less diverse non-EU student body than other institutional types. We do not observe these patterns among Golden Triangle institutions, which I argue is due to the fact that 'more autonomous universities are less commercial in temper' (ibid.: 306). The reason why UK HEIs positioned lower in the institutional hierarchy do not show values as high as non-Golden Triangle Russell Group universities on these recruitment strategy measures is because they may not have, in the first place, the global engagement that the latter universities have or the resources to pursue these strategies in the first place. Notwithstanding, there are notable exceptions, such as Coventry University and the University of Sunderland, which have historically shown high levels of non-EU international student recruitment and a strong commercial behaviour. In 2016/17, both universities had a satellite campus in London and around 60 percent of their non-EU international postgraduate taught students were studying for a degree in Law, Economics or Management (LEM). That being said, they had relatively high levels of country-oforigin diversity.

### 5. What does the future look like?

One of the key contributions of this thesis is that it offers the first comprehensive picture of non-EU international student recruitment at the institutional level and how the distribution of non-EU international students in UK HEIs have varied for the past 22 years in relation to UK policy contexts, and socioeconomic and political changes elsewhere. This allows for approximate predictions on what the future holds regarding non-EU international student recruitment in light of recent policy and geopolitical developments. In this sense, there have been two recent important events that are likely to affect overall numbers of non-EU international students coming to UK higher education and how these are distributed across HEIs: 1) the trade dispute between the US and China and 2) the reopening of the two-year post-study visa in the UK. I also discuss the potential implications of UK's decision to leave the European Union.

Over the past year, there have been political tensions between the US and China, the world's two largest economies, stemming from the Trump administration's claims that China uses unfair trade practices and engages in intellectual property theft (Kwan 2019). This has caused a 'tit-fortat exchange of tariff hikes' that has been labelled as a "trade war" by the media (ibid.: 1; BBC 2019), which has trickled down to student mobility flows between China and the US. Among other decisions, the US has imposed visa restrictions to Chinese postgraduates, shortening the length of their visas and increasing the rate of rejections (Kennedy 2019). This is likely to be behind the recent spike in Chinese undergraduate applicants to UK HEIs (Quinn 2019). Thus, while data from 2016/17 may display an accurate representation of the current reality regarding non-EU international student recruitment in UK higher education, data from more recent years, once it becomes available, may show slightly different patterns. This spike in the numbers of Chinese students applying to UK universities is likely to exacerbate the inequalities between HEIs in terms of their shares of students who are non-EU international, as previous research suggest Chinese students are particularly attuned to UK institutional hierarchies (Cebolla-Boado, Hu, and Soysal 2018). Notwithstanding, a significant increase in the numbers of Chinese students in the sector may make prestigious universities -particularly non-Golden Triangle Russell Group HEIs- reach a saturation point, which would eventually benefit lesser-status HEIs.

Furthermore, recruitment patterns are likely to be affected by a recent attempt to 'liberalise the student visa regime' (Parker, Warrell, and Jack 2019). Jo Johnson, a Conservative member of parliament at the time of writing and former universities minister from 2015 to 2019, led a crossparty move to replace the restrictive student visa system introduced during the Coalition government with one that would allow non-EU international students to stay and work in the UK for two years after they graduate (Javid 2019). This attempt has been translated into the reintroduction of a graduate route into employment for non-EU international students, which will allow non-EU international students to work or seek employment for two years after their graduation (HM Government 2019). This may cause a reverse of the trend that we have observed since 2010/11, when the numbers of students from South Asia, particularly India, decreased dramatically (MAC 2018). This, in turn, may also reverse the trend of growing disparities between HEIs in terms of their shares of students who are non-EU international that started in 2010/11. Notwithstanding, these differences, while smaller, are unlikely to disappear.

The decision to reintroduce the graduate route cannot be explained without taking Brexit – UK's decision, voted in June 2016, to withdraw from the European Union– into account. While a thorough analysis of the discursive drivers of Brexit go beyond the scope of this thesis, it is important to highlight the fact that pro-Brexit discourses included, inter alia, the perception that UK's market power and international connections made belonging to the EU unnecessary, and even detrimental (Koller, Kopf, and Migblauer 2019). In this sense, Damian Hinds, the former secretary of state for education argued in relation to the introduction of the graduate route that 'as we prepare to leave the EU it is more important than ever to reach out to our global partners and maximise the potential of our best assets. That includes our education offer and the international students this attracts' (Adams 2019). Moreover, reintroducing the graduate route may bring about increases in the numbers of incoming non-EU international students, which in turn may help some universities compensate for loses in EU student falls and research money (Marginson 2017). Thus, this decision could be understood as Boris Johnson's attempt to alleviate potential financial losses in UK higher education institutions in a post-Brexit environment.

However, the impact of Brexit on international student mobility to UK higher education institutions is yet unclear as we still do not know, in the time of writing, whether the EU and the UK will strike a deal, and whether EU students will be charged higher fees and the UK Government will end EU students' access to student loans (Hillman 2019). In fact, since 2016, when the UK voted to leave the European Union, the numbers of EU students have increased from 134,835 to 139,150, representing similar growth than in previous years (HESA 2018). However, this situation may be reversed if EU students are asked to pay fee levels in line with what non-EU international students pay and if they are not allowed to take Government-backed loans anymore. Drawing from the research presented in this thesis, it is likely that the impact of the latter will not be borne equally across the sector. As suggested by Nick Hillman, the director of the Higher Education Policy Institute (HEPI), 'institutions with high demand [that is, prestigious HEIs] could be expected to continue filling their places even after increasing fees for EU undergraduates' (Hillman 2019: 1). Thus, it is likely that in an event in which UK higher education becomes more expensive -and with less favourable migration arrangements- for EU international students, lesser-status universities will suffer the starkest declines in EU international student numbers. However, the financial loss caused by dwindling numbers of EU international students can be compensated -at least, theoretically- by charging more to those who do come. Notwithstanding, the reduction of this subset of students would certainly impact the diversity of UK HEIs' international student bodies. Finally, if Brexit eventually materialises, it could also mean an increase in the numbers of non-EU international students caused by the decline in the value of the pound, which would make 'the UK relatively cheaper compared to its main competitors for international students' (ibid.).

### 6. Areas for further research

During the process of researching and writing this thesis, I have identified several research gaps that I would like to address in the future. First, there is one element that I would have liked to include in my research regarding non-EU international student recruitment and the behaviour of universities in the field of UK higher education: selectivity. As suggested by Marginson, an
important element in understanding the autonomous nature of the Global elite in the field of higher education is the fact that 'places [in this HEIs] are prized by both students and academic faculty. Selectivity is enhanced by modest student intakes [...]' (Marginson 2008: 305). However, as suggested elsewhere in this thesis, the only source of application data in UK higher education – UCAS– provides a partial and imperfect picture regarding non-EU international students, as only a fraction of them apply to undergraduate courses through this agency (HM Government 2013). To address this gap, it would be possible to make Freedom of Information (FOI) requests to individual universities to provide data on both undergraduate and postgraduate applications and acceptances. This would allow us to better understand how selectivity works in UK higher education regarding non-EU international students and how it is related to UK institutional hierarchies.

Moreover, when I started this project, one of my aims was to understand the relationship between social class and access to international circuits of higher education, expanding the current debates that exist around widening participation in national contexts (cf. Boliver 2013; Wakeling and Laurison 2017; Troiano and Elias 2014). However, there is no comprehensive data on the social class background of non-EU international students in UK higher education. This is probably due to two reasons: 1) as argued by Tannock, widening participation stops at the border (2013), in the sense that equality of opportunity policies do not have non-citizens as objects; and 2) the difficulty –or impossibility– to come up with a social class measurement that applies to different national and regional contexts. This could be addressed by sampling students from a single country and developing, together with scholars working on social stratification in that country, a social class scheme that would allow us to understand the relationship between students' social background, their mobility patterns and the kind of institutions they go to once in the UK.

Finally, it would be valuable to seek to understand mobility patterns to individual institutions in a comparative fashion. Particularly, it would be considerably useful to understand how international student mobility works in the context of less hierarchical systems and how universities behave within those systems regarding the recruitment of internationally mobile students. Previous research suggests that HEIs in other European contexts, while not driven by financial returns, still pursue increased recruitment because they are 'embedded in a globally competitive arena for status [which] spurs a conception of internationalization as instrumental to prestige' (Seeber et al. 2016: 698). However, recruitment practices directed exclusively to prestige rather than economic returns may lead to different institutional behaviours.

To conclude, this research has provided new substantial evidence regarding the relationship between the differentiated nature of UK higher education and non-EU international student mobility to the country and how this relationship has evolved over time, an issue that is not always taken into account in research on international student mobility patterns. Moreover, I have also shown that the differentiated nature of UK higher education does not only impact the number of non-EU international students coming to individual HEIs but also the terms in which they are recruited. Thus, it is paramount that future research on the mobility of international students, both to the UK and elsewhere, takes into account institutional differentiation, even in contexts in which the latter may not be as pronounced as in Anglophone countries, and how the relationship between institutional differentiation and internationals student mobility varies across distinct policy environments. Moreover, future policy efforts need to bear in mind that international student mobility to the UK has a substantial impact on the distribution of resources –both financial and symbolic– across UK HEIs, particularly if policy-makers intend to address issues of equity in higher education.

# Appendices

# Appendix 1. UK higher education institutions (HEIs) originally included in the HESA dataset and the academic years for which data is available

HEI HESA code	HEI name	Academic years
0001	The Open University	1995/96 - 2016/17
0002	Cranfield University	1995/96 - 2016/17
0003	Royal College of Art	1995/96 - 2016/17
0004	The College of Guidance Studies	1995/96 - 1999/00
0006	The Royal College of Nursing	1995/96 - 2006/07
0007	Bishop Grosseteste University	1995/96 - 2016/17
0008	Bretton Hall College of HE	1995/96 - 2000/01
0009	Buckinghamshire New University	1995/96 - 2016/17
0010	The Royal Central School of Speech and Drama	1995/96 - 2016/17
0011	University of Chester	1995/96 - 2016/17
0012	Canterbury Christ Church University	1995/96 - 2016/17
0013	York St John University	1995/96 - 2016/17
0014	University of St Mark and St John	1995/96 - 2016/17
0015	Dartington College of Arts	1995/96 - 2007/08
0016	Edge Hill University	1995/96 - 2016/17
0017	Falmouth University	1995/96 - 2016/17
0018	Harper Adams University	1995/96 - 2016/17
0019	Homerton College	1995/96 - 2004/05
0020	Kent Institute of Art and Design	1995/96 - 2004/05
0021	The University of Winchester	1995/96 - 2016/17
0022	La Sainte Union College of HE	1995/96 - 1996/97
0023	Liverpool Hope University	1995/96 - 2016/17
0024	University of the Arts, London	1995/96 - 2016/17
0025	Loughborough College of Art and Design	1995/96 - 1997/98
0026	University of Bedfordshire	1995/96 - 2016/17

0027	The University of Northampton	1995/96 - 2016/17
0028	Newman University	1995/96 - 2016/17
0029	North Riding College Higher Education Corporation	1995/96 - 1999/00
0030	Ravensbourne	1995/96 - 2016/17
0031	Roehampton University	1995/96 - 2016/17
0032	Rose Bruford College of Theatre and Performance	1995/96 - 2016/17
0033	Royal Academy of Music	1995/96 - 2016/17
0034	Royal College of Music	1995/96 - 2016/17
0035	Royal Northern College of Music	1995/96 - 2016/17
0036	Salford College of Technology	1995/96 - 1995/96
0037	Southampton Solent University	1995/96 - 2016/17
0038	University of Cumbria	1995/96 - 2016/17
0039	St Mary's University, Twickenham	1995/96 - 2016/17
0040	Leeds Trinity University	1995/96 - 2016/17
0041	Trinity Laban Conservatoire of Music and Dance	1995/96 - 2016/17
0042	Westminster College	1995/96 - 1999/00
0044	The Surrey Institute of Art and Design, University College	1995/96 - 2004/05
0045	Winchester School of Art	1995/96 - 1995/96
0046	University of Worcester	1995/96 - 2016/17
0047	Anglia Ruskin University	1995/96 - 2016/17
0048	Bath Spa University	1995/96 - 2016/17
0049	The University of Bolton	1995/96 - 2016/17
0050	Bournemouth University	1995/96 - 2016/17
0051	The University of Brighton	1995/96 - 2016/17
0052	Birmingham City University	1995/96 - 2016/17
0053	The University of Central Lancashire	1995/96 - 2016/17
0054	University of Gloucestershire	1995/96 - 2016/17
0055	London Guildhall University	1995/96 - 2001/02
0056	Coventry University	1995/96 - 2016/17

0057	University of Derby	1995/96 - 2016/17
0058	The University of East London	1995/96 - 2016/17
0059	The University of Greenwich	1995/96 - 2016/17
0060	University of Hertfordshire	1995/96 - 2016/17
0061	The University of Huddersfield	1995/96 - 2016/17
0062	The University of Lincoln	1995/96 - 2016/17
0063	Kingston University	1995/96 - 2016/17
0064	Leeds Beckett University	1995/96 - 2016/17
0065	Liverpool John Moores University	1995/96 - 2016/17
0066	The Manchester Metropolitan University	1995/96 - 2016/17
0067	Middlesex University	1995/96 - 2016/17
0068	De Montfort University	1995/96 - 2016/17
0069	University of Northumbria at Newcastle	1995/96 - 2016/17
0070	The University of North London	1995/96 - 2001/02
0071	The Nottingham Trent University	1995/96 - 2016/17
0072	Oxford Brookes University	1995/96 - 2016/17
0073	University of Plymouth	1995/96 - 2016/17
0074	The University of Portsmouth	1995/96 - 2016/17
0075	Sheffield Hallam University	1995/96 - 2016/17
0076	London South Bank University	1995/96 - 2016/17
0077	Staffordshire University	1995/96 - 2016/17
0078	The University of Sunderland	1995/96 - 2016/17
0079	Teesside University	1995/96 - 2016/17
0080	The University of West London	1995/96 - 2016/17
0081	University of the West of England, Bristol	1995/96 - 2016/17
0082	The University of Chichester	1995/96 - 2016/17
0083	The University of Westminster	1995/96 - 2016/17
0084	Wimbledon School of Art	1995/96 - 2005/06
0085	The University of Wolverhampton	1995/96 - 2016/17
0086	The University of Wales, Newport	1995/96 - 2012/13
I		

0087	Glyndŵr University	1995/96 - 2016/17
0088	Coleg Normal	1995/96 - 1995/96
0089	Cardiff Metropolitan University	1995/96 - 2016/17
0090	University of South Wales	1995/96 - 2016/17
0091	Swansea Metropolitan University	1995/96 - 2011/12
0092	Trinity University College	1995/96 - 2009/10
0095	University of Abertay Dundee	1995/96 - 2016/17
0096	Edinburgh College of Art	1995/96 - 2010/11
0097	Glasgow School of Art	1995/96 - 2016/17
0098	Moray House Institute of Education	1995/96 - 1997/98
0099	Northern College of Education	1995/96 - 2000/01
0100	Queen Margaret University, Edinburgh	1995/96 - 2016/17
0101	Royal Conservatoire of Scotland	1995/96 - 2016/17
0102	St Andrew's College of Education	1995/96 - 1998/99
0103	The Scottish College of Textiles	1995/96 - 1997/98
0104	The Robert Gordon University	1995/96 - 2016/17
0105	The University of the West of Scotland	1995/96 - 2016/17
0106	Glasgow Caledonian University	1995/96 - 2016/17
0107	Edinburgh Napier University	1995/96 - 2016/17
0108	Aston University	1995/96 - 2016/17
0109	The University of Bath	1995/96 - 2016/17
0110	The University of Birmingham	1995/96 - 2016/17
0111	The University of Bradford	1995/96 - 2016/17
0112	The University of Bristol	1995/96 - 2016/17
0113	Brunel University London	1995/96 - 2016/17
0114	The University of Cambridge	1995/96 - 2016/17
0115	City, University of London	1995/96 - 2016/17
0116	University of Durham	1995/96 - 2016/17
0117	The University of East Anglia	1995/96 - 2016/17
0118	The University of Essex	1995/96 - 2016/17
0119	The University of Exeter	1995/96 - 2016/17

0120	The University of Hull	1995/96 - 2016/17
0121	Keele University	1995/96 - 2016/17
0122	The University of Kent	1995/96 - 2016/17
0123	The University of Lancaster	1995/96 - 2016/17
0124	The University of Leeds	1995/96 - 2016/17
0125	The University of Leicester	1995/96 - 2016/17
0126	The University of Liverpool	1995/96 - 2016/17
0127	Birkbeck College	1995/96 - 2016/17
0129	Charing Cross and Westminster Medical School	1995/96 - 1996/97
0131	Goldsmiths College	1995/96 - 2016/17
0132	Imperial College of Science, Technology and Medicine	1995/96 - 2016/17
0133	Institute of Education	1995/96 - 2014/15
0134	King's College London	1995/96 - 2016/17
0135	London Business School	1995/96 - 2016/17
0137	London School of Economics and Political Science	1995/96 - 2016/17
0138	London School of Hygiene and Tropical Medicine	1995/96 - 2016/17
0139	Queen Mary University of London	1995/96 - 2016/17
0140	Royal Free Hospital School of Medicine	1995/96 - 1997/98
0141	Royal Holloway and Bedford New College	1995/96 - 2016/17
0142	Royal Postgraduate Medical School	1995/96 - 1996/97
0143	The Royal Veterinary College	1995/96 - 2016/17
0145	St George's, University of London	1995/96 - 2016/17
0146	SOAS University of London	1995/96 - 2016/17
0147	The School of Pharmacy	1995/96 - 2011/12
0148	United Medical and Dental Schools, Guy's and St Thomas's Hospitals	1995/96 - 1997/98
0149	University College London	1995/96 - 2016/17
0150	Wye College	1995/96 - 1999/00

0151	University of London (Institutes and activities)	1995/96 - 2016/17
0152	Loughborough University	1995/96 - 2016/17
0153	University of Manchester	1995/96 - 2003/04
0154	Newcastle University	1995/96 - 2016/17
0155	University of Nottingham	1995/96 - 2016/17
0156	The University of Oxford	1995/96 - 2016/17
0157	The University of Reading	1995/96 - 2016/17
0158	The University of Salford	1995/96 - 2016/17
0159	The University of Sheffield	1995/96 - 2016/17
0160	The University of Southampton	1995/96 - 2016/17
0161	The University of Surrey	1995/96 - 2016/17
0162	The University of Sussex	1995/96 - 2016/17
0163	The University of Warwick	1995/96 - 2016/17
0164	The University of York	1995/96 - 2016/17
0165	The University of Manchester Institute of Science and Technology	1995/96 - 2003/04
0167	The University of Edinburgh	1995/96 - 2016/17
0168	The University of Glasgow	1995/96 - 2016/17
0169	The University of Strathclyde	1995/96 - 2016/17
0170	The University of Aberdeen	1995/96 - 2016/17
0171	Heriot-Watt University	1995/96 - 2016/17
0172	The University of Dundee	1995/96 - 2016/17
0173	The University of St Andrews	1995/96 - 2016/17
0174	The University of Stirling	1995/96 - 2016/17
0175	SRUC	1995/96 - 2016/17
0176	University of Wales Trinity Saint David	1995/96 - 2016/17
0177	Aberystwyth University	1995/96 - 2016/17
0178	Bangor University	1995/96 - 2016/17
0179	Cardiff University	1995/96 - 2016/17
0180	Swansea University	1995/96 - 2016/17

0181	University of Wales College of Medicine	1995/96 - 2003/04
0182	Royal Welsh College of Music and Drama	1995/96 - 2006/07
0184	The Queen's University of Belfast	1995/96 - 2016/17
0185	University of Ulster	1995/96 - 2016/17
0186	The University of Wales (central functions)	2014/15 - 2016/17
0187	Westhill College	1995/96 - 1998/99
0188	The Institute of Cancer Research	2000/01 - 2016/17
0189	Writtle University College	1995/96 - 2016/17
0190	Norwich University of the Arts	1995/96 - 2016/17
0191	Northern School of Contemporary Dance	1995/96 - 2002/03
0192	Cumbria Institute of the Arts	1997/98 - 2006/07
0193	Stranmillis University College	1999/00 - 2016/17
0194	St Mary's University College	1999/00 - 2016/17
0195	Royal Agricultural University	2001/02 - 2016/17
0196	University of the Highlands and Islands	2001/02 - 2016/17
0197	The Arts University Bournemouth	2001/02 - 2016/17
0198	Bell College	2001/02 - 2006/07
0199	Conservatoire for Dance and Drama	2001/02 - 2016/17
0200	University College Birmingham	2002/03 - 2016/17
0201	Courtauld Institute of Art	2002/03 - 2016/17
0202	London Metropolitan University	2002/03 - 2016/17
0203	The University of Buckingham	2004/05 - 2016/17
0204	The University of Manchester	2004/05 - 2016/17
0205	Heythrop College	2006/07 - 2016/17
0206	University for the Creative Arts	2005/06 - 2016/17
0207	Leeds College of Music	2005/06 - 2010/11
0208	Guildhall School of Music and Drama	2006/07 - 2016/17
0209	The Liverpool Institute for Performing Arts	2006/07 - 2016/17

0210	University of Suffolk	2007/08 - 2016/17
0211	Leeds Arts University	2011/12 - 2016/17
0228	Liverpool School of Tropical Medicine	2015/16 - 2016/17
0229	The National Film and Television School	2014/15 - 2016/17
0230	Plymouth College of Art	2014/15 - 2016/17
0334	Grŵp Llandrillo Menai	2016/17 - 2016/17
0335	Grŵp NPTC Group	2016/17 - 2016/17
0336	Gower College Swansea	2016/17 - 2016/17
0337	The University College of Osteopathy	2016/17 - 2016/17
2001	Institute of Psychiatry (associated with King's College London)	1995/96 - 1996/97

#### Appendix 2. Final sample of UK higher education institutions (HEIs) included in the analysis by the derived variables measuring

# institutional reputation: HEI type, Boliver 2015, CUG 2017, The Guardian 2017, THE 2015, and ARWU 2015

HEI HESA code	HEI name	HEI type	Boliver 2015	CUG 2017	The Guardian 2017	THE 2015	AR₩U 2015
0002	Cranfield University	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0003	Royal College of Art	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0007	Bishop Grosseteste University	Post-1992	Cluster 4	119	Not ranked	Not ranked	Not ranked
0009	Buckinghamshire New University	Post-1992	Cluster 4	113	116	Not ranked	Not ranked
0010	The Royal Central School of Speech and Drama	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0011	University of Chester	Post-1992	Cluster 3	94	65	Not ranked	Not ranked
0012	Canterbury Christ Church University	Post-1992	Cluster 3	112	109	Not ranked	Not ranked
0013	York St John University	Post-1992	Cluster 4	107	104	Not ranked	Not ranked
0014	University of St Mark and St John	Post-1992	Cluster 4	124	Not ranked	Not ranked	Not ranked
0016	Edge Hill University	Post-1992	Cluster 4	71	64	Not ranked	Not ranked
0017	Falmouth University	Post-1992	Cluster 3	58	21	Not ranked	Not ranked
0018	Harper Adams University	Post-1992	Cluster 3	46	Not ranked	Not ranked	Not ranked
0021	The University of Winchester	Post-1992	Cluster 3	74	63	Not ranked	Not ranked
0023	Liverpool Hope University	Post-1992	Cluster 4	83	79	Not ranked	Not ranked
0024	University of the Arts, London	Post-1992	Cluster 3	85	53	Not ranked	Not ranked
0026	University of Bedfordshire	Post-1992	Cluster 3	120	113	Not ranked	Not ranked
0027	The University of Northampton	Post-1992	Cluster 3	87	73	Not ranked	Not ranked
0028	Newman University	Post-1992	Cluster 3	117	110	Not ranked	Not ranked
0030	Ravensbourne	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0031	Roehampton University	Post-1992	Cluster 3	69	90	Not ranked	Not ranked
0032	Rose Bruford College of Theatre and Performance	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked

0033	Royal Academy of Music	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0034	Royal College of Music	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0035	Royal Northern College of Music	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0037	Southampton Solent University	Post-1992	Cluster 4	115	100	Not ranked	Not ranked
0038	University of Cumbria	Post-1992	Cluster 4	121	117	Not ranked	Not ranked
0039	St Mary's University, Twickenham	Post-1992	Not clustered	118	106	Not ranked	Not ranked
0040	Leeds Trinity University	Post-1992	Cluster 4	103	88	Not ranked	Not ranked
0041	Trinity Laban Conservatoire of Music and Dance	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0046	University of Worcester	Post-1992	Cluster 3	97	95	Not ranked	Not ranked
0047	Anglia Ruskin University	Post-1992	Cluster 4	110	66	Not ranked	Not ranked
0048	Bath Spa University	Post-1992	Cluster 3	76	66	Not ranked	Not ranked
0049	The University of Bolton	Post-1992	Cluster 4	122	93	Not ranked	Not ranked
0050	Bournemouth University	Post-1992	Cluster 3	56	79	Not ranked	Not ranked
0051	The University of Brighton	Post-1992	Cluster 3	90	91	Not ranked	Not ranked
0052	Birmingham City University	Post-1992	Cluster 3	95	105	Not ranked	Not ranked
0053	The University of Central Lancashire	Post-1992	Cluster 3	99	87	Not ranked	Not ranked
0054	University of Gloucestershire	Post-1992	Cluster 3	89	72	Not ranked	Not ranked
0056	Coventry University	Post-1992	Cluster 3	50	15	Not ranked	Not ranked
0057	University of Derby	Post-1992	Cluster 3	91	48	Not ranked	Not ranked
0058	The University of East London	Post-1992	Cluster 4	126	115	Not ranked	Not ranked
0059	The University of Greenwich	Post-1992	Cluster 3	98	98	Not ranked	Not ranked
0060	University of Hertfordshire	Post-1992	Cluster 3	79	94	Ranked	Not ranked
0061	The University of Huddersfield	Post-1992	Cluster 3	81	77	Not ranked	Not ranked
0062	The University of Lincoln	Post-1992	Cluster 3	49	56	Not ranked	Not ranked
0063	Kingston University	Post-1992	Cluster 3	109	88	Not ranked	Not ranked

0064	Leeds Beckett University	Post-1992	Cluster 3	114	114	Not ranked	Not ranked
0065	Liverpool John Moores University	Post-1992	Cluster 3	74	84	Not ranked	Not ranked
0066	The Manchester Metropolitan University	Post-1992	Cluster 3	57	60	Not ranked	Not ranked
0067	Middlesex University	Post-1992	Cluster 3	78	74	Not ranked	Not ranked
0068	De Montfort University	Post-1992	Cluster 3	54	61	Not ranked	Not ranked
0069	University of Northumbria at Newcastle	Post-1992	Cluster 3	59	50	Not ranked	Not ranked
0071	The Nottingham Trent University	Post-1992	Cluster 3	63	53	Not ranked	Not ranked
0072	Oxford Brookes University	Post-1992	Cluster 3	65	57	Not ranked	Not ranked
0073	University of Plymouth	Post-1992	Cluster 3	84	76	Ranked	Not ranked
0074	The University of Portsmouth	Post-1992	Cluster 3	61	43	Ranked	Not ranked
0075	Sheffield Hallam University	Post-1992	Cluster 3	72	86	Not ranked	Not ranked
0076	London South Bank University	Post-1992	Cluster 3	115	107	Not ranked	Not ranked
0077	Staffordshire University	Post-1992	Cluster 3	101	69	Not ranked	Not ranked
0078	The University of Sunderland	Post-1992	Cluster 3	103	79	Not ranked	Not ranked
0079	Teesside University	Post-1992	Cluster 3	107	102	Not ranked	Not ranked
0080	The University of West London	Post-1992	Cluster 3	106	96	Not ranked	Not ranked
0081	University of the West of England, Bristol	Post-1992	Cluster 3	67	68	Not ranked	Not ranked
0082	The University of Chichester	Post-1992	Cluster 3	80	75	Not ranked	Not ranked
0083	The University of Westminster	Post-1992	Cluster 3	102	112	Not ranked	Not ranked
0085	The University of Wolverhampton	Post-1992	Cluster 4	Not ranked	Not ranked	Not ranked	Not ranked
0087	Glyndŵr University	Post-1992	Cluster 4	125	119	Not ranked	Not ranked
0089	Cardiff Metropolitan University	Post-1992	Cluster 3	72	91	Not ranked	Not ranked
0090	University of South Wales	Post-1992	Not clustered	99	111	Not ranked	Not ranked
0095	University of Abertay Dundee	Post-1992	Cluster 3	86	85	Not ranked	Not ranked
0097	Glasgow School of Art	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked

0100	Queen Margaret University, Edinburgh	Post-1992	Cluster 3	93	101	Not ranked	Not ranked
0101	Royal Conservatoire of Scotland	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0104	The Robert Gordon University	Post-1992	Cluster 3	64	44	Not ranked	Not ranked
0105	The University of the West of Scotland	Post-1992	Cluster 3	110	103	Not ranked	Not ranked
0106	Glasgow Caledonian University	Post-1992	Cluster 3	82	99	Not ranked	Not ranked
0107	Edinburgh Napier University	Post-1992	Cluster 3	92	70	Not ranked	Not ranked
0108	Aston University	Non-RG Pre-1992	Cluster 3	30	29	Ranked	Not ranked
0109	The University of Bath	Non-RG Pre-1992	Cluster 2	11	10	Ranked	Other ranked
0110	The University of Birmingham	Other Russell Group (RG)	Cluster 2	15	13	Ranked	Other ranked
0111	The University of Bradford	Non-RG Pre-1992	Cluster 3	53	52	Not ranked	Not ranked
0112	The University of Bristol	Other Russell Group (RG)	Cluster 2	24	38	Top 100	Top 100
0113	Brunel University London	Non-RG Pre-1992	Cluster 3	52	77	Ranked	Other ranked
0114	The University of Cambridge	Golden Triangle	Cluster 1	1	1	Top 100	Top 100
0115	City, University of London	Non-RG Pre-1992	Cluster 3	40	18	Not ranked	Not ranked
0116	University of Durham	Other Russell Group (RG)	Cluster 2	6	6	Top 100	Other ranked
0117	The University of East Anglia	Non-RG Pre-1992	Cluster 2	14	24	Ranked	Other ranked
0118	The University of Essex	Non-RG Pre-1992	Cluster 3	41	62	Ranked	Other ranked
0119	The University of Exeter	Other Russell Group (RG)	Cluster 2	13	11	Ranked	Other ranked
0120	The University of Hull	Non-RG Pre-1992	Cluster 3	68	71	Not ranked	Not ranked
0121	Keele University	Non-RG Pre-1992	Cluster 3	46	34	Not ranked	Not ranked
0122	The University of Kent	Non-RG Pre-1992	Cluster 2	23	23	Not ranked	Not ranked
0123	The University of Lancaster	Non-RG Pre-1992	Cluster 2	9	8	Ranked	Other ranked
0124	The University of Leeds	Other Russell Group (RG)	Cluster 2	16	16	Ranked	Other ranked
0125	The University of Leicester	Non-RG Pre-1992	Cluster 2	32	47	Ranked	Other ranked
0126	The University of Liverpool	Other Russell Group (RG)	Cluster 2	38	59	Ranked	Other ranked

0127	Birkbeck College	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Ranked	Not ranked
0131	Goldsmiths College	Non-RG Pre-1992	Cluster 2	51	46	Not ranked	Not ranked
0132	Imperial College of Science, Technology and Medicine	Golden Triangle	Cluster 2	4	7	Top 100	Top 100
0134	King's College London	Golden Triangle	Cluster 2	21	42	Top 100	Top 100
0135	London Business School	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0137	London School of Economics and Political Science	Golden Triangle	Cluster 2	3	12	Top 100	Other ranked
0138	London School of Hygiene and Tropical Medicine	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Other ranked
0139	Queen Mary University of London	Other Russell Group (RG)	Cluster 2	31	34	Ranked	Other ranked
0141	Royal Holloway and Bedford New College	Non-RG Pre-1992	Cluster 2	37	45	Ranked	Not ranked
0143	The Royal Veterinary College	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0145	St George's, University of London	Non-RG Pre-1992	Not clustered	44	Not ranked	Ranked	Not ranked
0146	SOAS University of London	Non-RG Pre-1992	Cluster 2	43	30	Not ranked	Not ranked
0149	University College London	Golden Triangle	Cluster 2	10	14	Top 100	Top 100
0152	Loughborough University	Non-RG Pre-1992	Cluster 2	7	4	Not ranked	Not ranked
0154	Newcastle University	Other Russell Group (RG)	Cluster 2	25	37	Ranked	Other ranked
0155	University of Nottingham	Other Russell Group (RG)	Cluster 2	21	25	Ranked	Other ranked
0156	The University of Oxford	Golden Triangle	Cluster 1	2	2	Top 100	Top 100
0157	The University of Reading	Non-RG Pre-1992	Cluster 2	27	32	Ranked	Other ranked
0158	The University of Salford	Non-RG Pre-1992	Cluster 3	95	83	Not ranked	Not ranked
0159	The University of Sheffield	Other Russell Group (RG)	Cluster 2	27	41	Ranked	Other ranked
0160	The University of Southampton	Other Russell Group (RG)	Cluster 2	17	16	Ranked	Other ranked
0161	The University of Surrey	Non-RG Pre-1992	Cluster 2	11	4	Not ranked	Other ranked
0162	The University of Sussex	Non-RG Pre-1992	Cluster 2	18	20	Ranked	Other ranked
0163	The University of Warwick	Other Russell Group (RG)	Cluster 2	8	9	Ranked	Top 100
0164	The University of York	Other Russell Group (RG)	Cluster 2	20	19	Ranked	Other ranked

0167	The University of Edinburgh	Other Russell Group (RG)	Cluster 2	19	22	Top 100	Top 100
0168	The University of Glasgow	Other Russell Group (RG)	Cluster 2	29	26	Top 100	Other ranked
0169	The University of Strathclyde	Non-RG Pre-1992	Cluster 2	48	51	Not ranked	Not ranked
0170	The University of Aberdeen	Non-RG Pre-1992	Cluster 2	42	36	Ranked	Other ranked
0171	Heriot-Watt University	Non-RG Pre-1992	Cluster 2	34	27	Not ranked	Not ranked
0172	The University of Dundee	Non-RG Pre-1992	Cluster 2	35	28	Ranked	Other ranked
0173	The University of St Andrews	Non-RG Pre-1992	Cluster 2	5	3	Ranked	Other ranked
0174	The University of Stirling	Non-RG Pre-1992	Cluster 3	39	58	Ranked	Not ranked
0175	SRUC	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0176	University of Wales Trinity Saint David	Non-RG Pre-1992	Cluster 4	123	Not ranked	Not ranked	Not ranked
0177	Aberystwyth University	Non-RG Pre-1992	Cluster 3	87	108	Ranked	Not ranked
0178	Bangor University	Non-RG Pre-1992	Cluster 3	62	55	Ranked	Not ranked
0179	Cardiff University	Other Russell Group (RG)	Cluster 2	35	33	Ranked	Other ranked
0180	Swansea University	Non-RG Pre-1992	Cluster 3	45	39	Not ranked	Not ranked
0184	The Queen's University of Belfast	Other Russell Group (RG)	Cluster 2	33	48	Ranked	Other ranked
0185	University of Ulster	Non-RG Pre-1992	Cluster 3	70	79	Not ranked	Not ranked
0188	The Institute of Cancer Research	Non-RG Pre-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0189	Writtle University College	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0190	Norwich University of the Arts	Post-1992	Not clustered	66	Not ranked	Not ranked	Not ranked
0195	Royal Agricultural University	Post-1992	Not clustered	103	Not ranked	Not ranked	Not ranked
0196	University of the Highlands and Islands	Post-1992	Cluster 3	Not ranked	Not ranked	Not ranked	Not ranked
0197	The Arts University Bournemouth	Post-1992	Cluster 3	76	Not ranked	Not ranked	Not ranked
0199	Conservatoire for Dance and Drama	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0200	University College Birmingham	Post-1992	Cluster 4	Not ranked	Not ranked	Not ranked	Not ranked
0201	Courtauld Institute of Art	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
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0202	London Metropolitan University	Post-1992	Cluster 4	127	118	Not ranked	Not ranked
0203	The University of Buckingham	Non-RG Pre-1992	Not clustered	55	Not ranked	Not ranked	Not ranked
0204	The University of Manchester	Other Russell Group (RG)	Cluster 2	25	31	Top 100	Top 100
0206	University for the Creative Arts	Post-1992	Cluster 3	59	39	Not ranked	Not ranked
0208	Guildhall School of Music and Drama	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0209	The Liverpool Institute for Performing Arts	Post-1992	Not clustered	Not ranked	Not ranked	Not ranked	Not ranked
0210	University of Suffolk	Post-1992	Cluster 4	Not ranked	97	Not ranked	Not ranked

### Appendix 3. Final sample of UK higher education institutions (HEIs) included in the analysis by the derived variables measuring HEIs'

geographic location:	NUTS1, HoC	Classification	, and Distance to KX	

HEI code	HEI name	Postcode	NUTS1	HoC Classification	Distance to KX
0002	Cranfield University	MK43 0AL	East of England	Village or Small Community	105
0003	Royal College of Art	SW7 2EU	London	Core City (London)	31
0007	Bishop Grosseteste University	LN1 3DY	East Midlands	Large Town	155
0009	Buckinghamshire New University	HP11 2JZ	South East	Large Town	79
0010	The Royal Central School of Speech and Drama	NW3 3HY	London	Core City (London)	18
0011	University of Chester	CH1 4BJ	North West	Large Town	153
0012	Canterbury Christ Church University	CT1 1QU	South East	Large Town	78
0013	York St John University	YO31 7EX	Yorkshire and The Humber	Large Town	159
0014	University of St Mark and St John	PL6 8BH	South West	Other City	259
0016	Edge Hill University	L39 4QP	North West	Medium Town	220
0017	Falmouth University	TR11 4RH	South West	Small Town	365
0018	Harper Adams University	TF10 8NB	West Midlands	Village or Small Community	218
0021	The University of Winchester	SO22 4NR	South East	Medium Town	105
0023	Liverpool Hope University	L16 9JD	North West	Core City (outside London)	184
0024	University of the Arts, London	WC1V 7EY	London	Core City (London)	9
0026	University of Bedfordshire	LU1 3JU	East of England	Other City	52
0027	The University of Northampton	NN1 5PH	East Midlands	Other City	106

0028	Newman University	B32 3NT	West Midlands	Core City (outside London)	145
0030	Ravensbourne	SE10 0EW	London	Core City (London)	27
0031	Roehampton University	SW15 5PJ	London	Core City (London)	58
0032	Rose Bruford College of Theatre and Performance	DA15 9DF	London	Core City (London)	49
0033	Royal Academy of Music	NW1 5HT	London	Core City (London)	13
0034	Royal College of Music	SW7 2BS	London	Core City (London)	28
0035	Royal Northern College of Music	M13 9RD	North West	Core City (outside London)	162
0037	Southampton Solent University	SO14 0YN	South East	Other City	153
0038	University of Cumbria	CA1 2HH	North West	Large Town	259
0039	St Mary's University, Twickenham	TW1 4SX	London	Core City (London)	68
0040	Leeds Trinity University	LS18 5HD	Yorkshire and The Humber	Core City (outside London)	191
0041	Trinity Laban Conservatoire of Music and Dance	SE10 9JF	London	Core City (London)	43
0046	University of Worcester	WR2 6AJ	West Midlands	Large Town	194
0047	Anglia Ruskin University	CB1 1PT	East of England	Large Town	72
0048	Bath Spa University	BA2 9BN	South West	Large Town	152
0049	The University of Bolton	BL3 5AB	North West	Other City	187
0050	Bournemouth University	BH12 5BB	South West	Large Town	216
0051	The University of Brighton	BN2 4AT	South East	Other City	135
0052	Birmingham City University	B5 5JU	West Midlands	Core City (outside London)	109
0053	The University of Central Lancashire	PR1 2HE	North West	Large Town	152
0054	University of Gloucestershire	GL50 2RH	South West	Large Town	176
0056	Coventry University	CV1 5FB	West Midlands	Other City	95

0057	University of Derby	DE22 1GB	East Midlands	Other City	138
0058	The University of East London	E16 2RD	London	Core City (London)	49
0059	The University of Greenwich	SE10 9LS	London	Core City (London)	40
0060	University of Hertfordshire	AL10 9AB	East of England	Medium Town	62
0061	The University of Huddersfield	HD1 3DH	Yorkshire and The Humber	Large Town	179
0062	The University of Lincoln	LN6 7TS	East Midlands	Large Town	131
0063	Kingston University	KT1 1LQ	London	Core City (London)	55
0064	Leeds Beckett University	LS1 3HE	Yorkshire and The Humber	Core City (outside London)	157
0065	Liverpool John Moores University	L2 2QP	North West	Core City (outside London)	174
0066	The Manchester Metropolitan University	M15 6BH	North West	Core City (outside London)	168
0067	Middlesex University	NW4 4BT	London	Core City (London)	33
0068	De Montfort University	LE1 9BH	East Midlands	Other City	90
0069	University of Northumbria at Newcastle	NE1 8ST	North East	Core City (outside London)	190
0071	The Nottingham Trent University	NG1 4FQ	East Midlands	Core City (outside London)	134
0072	Oxford Brookes University	OX3 0BP	South East	Large Town	97
0073	University of Plymouth	PL4 8AA	South West	Other City	242
0074	The University of Portsmouth	PO1 2UP	South East	Other City	142
0075	Sheffield Hallam University	S1 1WB	Yorkshire and The Humber	Core City (outside London)	144
0076	London South Bank University	SE1 0AA	London	Core City (London)	25
0077	Staffordshire University	ST4 2DE	West Midlands	Other City	109
0078	The University of Sunderland	SR1 3SD	North East	Other City	216

0079	Teesside University	TS1 3BX	North East	Other City	191
0080	The University of West London	W5 5RF	London	Core City (London)	49
0081	University of the West of England, Bristol	BS16 1QY	South West	Core City (outside London)	165
0082	The University of Chichester	PO19 6PE	South East	Medium Town	147
0083	The University of Westminster	W1B 2HW	London	Core City (London)	10
0085	The University of Wolverhampton	WV1 1LY	West Midlands	Other City	136
0087	Glyndŵr University	LL11 2AW	Wales	Large Town	168
0089	Cardiff Metropolitan University	CF5 2YB	Wales	Core City (outside London)	181
0090	University of South Wales	CF37 1DL	Wales	Medium Town	228
0095	University of Abertay Dundee	DD1 1HG	Scotland	Large Town	387
0097	Glasgow School of Art	G3 6RQ	Scotland	Core City (outside London)	316
0100	Queen Margaret University, Edinburgh	EH21 6UU	Scotland	Core City (outside London)	292
0101	Royal Conservatoire of Scotland	G2 3DB	Scotland	Core City (outside London)	312
0104	The Robert Gordon University	AB10 7QB	Scotland	Other City	477
0105	The University of the West of Scotland	PA1 2BE	Scotland	Core City (outside London)	311
0106	Glasgow Caledonian University	G4 0BA	Scotland	Core City (outside London)	319
0107	Edinburgh Napier University	EH11 4BN	Scotland	Core City (outside London)	305
0108	Aston University	B4 7ET	West Midlands	Core City (outside London)	115
0109	The University of Bath	BA2 7AY	South West	Large Town	142
0110	The University of Birmingham	B15 2TT	West Midlands	Core City (outside London)	120
0111	The University of Bradford	BD7 1DP	Yorkshire and The Humber	Other City	191
0112	The University of Bristol	BS8 1QU	South West	Core City (outside London)	157
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0113	Brunel University London	UB8 3PH	London	Core City (London)	71
0114	The University of Cambridge	CB2 1TN	East of England	Large Town	94
0115	City, University of London	EC1V 0HB	London	Core City (London)	17
0116	University of Durham	DH1 3LE	North East	Medium Town	205
0117	The University of East Anglia	NR4 7TJ	East of England	Other City	180
0110				Village or Small	440
0118	The University of Essex	CO4 3SQ	East of England	Community	118
0119	The University of Exeter	EX4 4PY	South West	Large Town	185
0120	The University of Hull	HU6 7RX	Yorkshire and The Humber	Other City	219
0121	Keele University	ST5 5BG	West Midlands	Village or Small Community	156
0122	The University of Kent	CT2 7NZ	South East	Large Town	90
0123	The University of Lancaster	LA1 4YW	North West	Village or Small Community	199
0124	The University of Leeds	LS2 9JT	Yorkshire and The Humber	Core City (outside London)	169
0125	The University of Leicester	LE1 7RH	East Midlands	Other City	91
0126	The University of Liverpool	L69 7ZX	North West	Core City (outside London)	175
0127	Birkbeck College	WC1E 7HX	London	Core City (London)	11
0131	Goldsmiths College	SE14 6NW	London	Core City (London)	39
0132	Imperial College of Science, Technology and Medicine	SW7 2AZ	London	Core City (London)	27
0134	King's College London	WC2R 2LS	London	Core City (London)	23
0135	London Business School	NW1 4SA	London	Core City (London)	16
0137	London School of Economics and Political Science	WC2A 2AE	London	Core City (London)	13

0138	London School of Hygiene and Tropical Medicine	WC1E 7HT	London	Core City (London)	11
0139	Queen Mary University of London	E1 4NS	London	Core City (London)	28
0141	Royal Holloway and Bedford New College	TW20 0EX	South East	Medium Town	109
0143	The Royal Veterinary College	NW1 0TU	London	Core City (London)	22
0145	St George's, University of London	SW17 0RE	London	Core City (London)	43
0146	SOAS University of London	WC1H 0XG	London	Core City (London)	11
0149	University College London	WC1E 6BT	London	Core City (London)	10
0151	University of London (Institutes and activities)	WC1E 7HU	London		11
0152	Loughborough University	LE11 3TU	East Midlands	Large Town	129
0154	Newcastle University	NE1 7RU	North East	Core City (outside London)	188
0155	University of Nottingham	NG7 2RD	East Midlands	Core City (outside London)	140
0156	The University of Oxford	OX1 2JD	South East	Large Town	99
0157	The University of Reading	RG6 6AH	South East	Other City	79
0158	The University of Salford	M5 4WT	North West	Core City (outside London)	170
0159	The University of Sheffield	S10 2TN	Yorkshire and The Humber	Core City (outside London)	167
0160	The University of Southampton	SO17 1BJ	South East	Other City	157
0161	The University of Surrey	GU2 7XH	South East	Large Town	100
0162	The University of Sussex	BN1 9RH	South East	Village or Small Community	144
0163	The University of Warwick	CV4 7AL	West Midlands	Other City	96
0164	The University of York	YO10 5DD	Yorkshire and The Humber	Large Town	172
0167	The University of Edinburgh	EH8 9YL	Scotland	Core City (outside London)	294

0168	The University of Glasgow	G12 8QQ	Scotland	Core City (outside London)	309
0169	The University of Strathclyde	G1 1XQ	Scotland	Core City (outside London)	317
0170	The University of Aberdeen	AB24 3FX	Scotland	Other City	464
0171	Heriot-Watt University	EH14 4AS	Scotland	Core City (outside London)	334
0172	The University of Dundee	DD1 4HN	Scotland	Large Town	384
0173	The University of St Andrews	KY16 9AJ	Scotland	Small Town	392
0174	The University of Stirling	FK9 4LA	Scotland	Medium Town	368
0175	SRUC	EH9 3JG	Scotland	Core City (outside London)	300
0176	University of Wales Trinity Saint David	SA31 3EP	Wales	Small Town	290
0177	Aberystwyth University	SY23 3FL	Wales	Small Town	297
0178	Bangor University	LL57 2DG	Wales	Small Town	215
0179	Cardiff University	CF10 3AT	Wales	Core City (outside London)	174
0180	Swansea University	SA2 8PP	Wales	Other City	234
0184	The Queen's University of Belfast	BT7 1NN	Northern Ireland	Other City	999
0185	University of Ulster	BT15 1ED	Northern Ireland	Small Town	996
0188	The Institute of Cancer Research	SW3 6JB	London	Core City (London)	27
0189	Writtle University College	CM1 3RR	East of England	Large Town	87
0190	Norwich University of the Arts	NR2 4SN	East of England	Other City	165
0195	Royal Agricultural University	GL7 6JS	South West	Small Town	192
0196	University of the Highlands and Islands	IV3 5SQ	Scotland	Medium Town	850
0197	The Arts University Bournemouth	BH12 5HH	South West	Large Town	218
0199	Conservatoire for Dance and Drama	WC1H 9JJ	London	Core City (London)	10
0200	University College Birmingham	B3 1JB	West Midlands	Core City (outside London)	106

0201	Courtauld Institute of Art	WC2R 0RN	London	Core City (London)	24
0202	London Metropolitan University	N7 8DB	London	Core City (London)	10
0203	The University of Buckingham	MK18 1EG	South East	Small Town	105
0204	The University of Manchester	M13 9PL	North West	Core City (outside London)	169
0206	University for the Creative Arts	CT1 3AN	South East	Medium Town	83
0208	Guildhall School of Music and Drama	EC2Y 8DT	London	Core City (London)	13
0209	The Liverpool Institute for Performing Arts	L1 9HF	North West	Core City (outside London)	178
0210	University of Suffolk	IP4 1QJ	East of England	Large Town	148

# Appendix 4. "Old" and "new" HESA cost centres. "New" cost centres classified by Purcell

### et al.'s (2009) classification

"Old" cost centres	"New" cost centres	Purcell's et al. classification
Agriculture & forestry	Agriculture, forestry & food science	Vocationally-focused
Anatomy & physiology	Anatomy & physiology	STEM incl Medicine
Architecture, built environment & planning	Anthropology & development studies	Academically-focused
Biosciences	Archaeology	Academically-focused
Business & management studies	Architecture, built environment & planning	Vocationally-focused
Catering & hospitality management	Area studies	Academically-focused
Chemical engineering	Art & design	Vocationally-focused
Chemistry	Biosciences	STEM incl Medicine
Civil engineering	Business & management studies	LEM (Law, Economics and Management)
Clinical dentistry	Catering & hospitality management	LEM (Law, Economics and Management)
Clinical medicine	Chemical engineering	STEM incl Medicine
Continuing education	Chemistry	STEM incl Medicine
Design & creative arts	Civil engineering	STEM incl Medicine
Earth, marine & environmental sciences	Classics	Academically-focused
Education	Clinical dentistry	STEM incl Medicine
Electrical, electronic & computer engineering	Clinical medicine	STEM incl Medicine
General engineering	Continuing education	Vocationally-focused
General sciences	Earth, marine & environmental sciences	STEM incl Medicine
Geography	Economics & econometrics	LEM (Law, Economics and Management)
Health & community studies	Education	Vocationally-focused
Humanities & language based studies	Electrical, electronic & computer engineering	STEM incl Medicine
Information technology & systems sciences	English language & literature	Academically-focused
Librarianship, communication & media studies	General engineering	STEM incl Medicine
Mathematics	Geography & environmental studies	Academically-focused
Mechanical, aero & production engineering	Health & community studies	STEM incl Medicine

Mineral, metallurgy & materials engineering	History	Academically-focused
Nursing & paramedical studies	IT, systems sciences & computer software engineering	STEM incl Medicine
Other technologies	Law	LEM (Law, Economics and Management)
Pharmacology	Mathematics	STEM incl Medicine
Pharmacy	Mechanical, aero & production engineering	STEM incl Medicine
Physics	Media studies	Vocationally-focused
Psychology & behavioural sciences	Mineral, metallurgy & materials engineering	STEM incl Medicine
Social studies	Modern languages	Academically-focused
Veterinary science	Music, dance, drama & performing arts	Vocationally-focused
	Nursing & allied health professions	Vocationally-focused
	Pharmacy & pharmacology	STEM incl Medicine
	Philosophy	
	Physics	STEM incl Medicine
	Politics & international studies	Academically-focused
	Psychology & behavioural sciences	STEM incl Medicine
	Social work & social policy	Vocationally-focused
	Sociology	Academically-focused
	Sports science & leisure studies	Vocationally-focused
	Theology & religious studies	Academically-focused
	Veterinary science	STEM incl Medicine

Country of origin	Continent/region	World Bank classification
Afghanistan	Asia	Low income
Albania	Europe (non-EU)	Upper middle income
Algeria	Africa	Upper middle income
American Samoa	Australasia	Upper middle income
Andorra	Europe (non-EU)	High income
Angola	Africa	Lower middle income
Antigua and Barbuda	North America	High income
Argentina	South America	Upper middle income
Armenia	Asia	Lower middle income
Aruba	North America	High income
Australia	Australasia	High income
Azerbaijan	Asia	Upper middle income
Bahamas, The	North America	High income
Bahrain	Middle East	High income
Bangladesh	Asia	Lower middle income
Barbados	North America	High income
Belarus	Europe (non-EU)	Upper middle income
Belize	North America	Upper middle income
Benin	Africa	Low income
Bermuda	North America	High income
Bhutan	Asia	Lower middle income
Bolivia	South America	Lower middle income
Bosnia and Herzegovina	Europe (non-EU)	Upper middle income
Botswana	Africa	Upper middle income
Brazil	South America	Upper middle income
British Virgin Islands	North America	High income
Brunei	Asia	High income
Burkina Faso	Africa	Low income

# Appendix 5. Countries of origin of non-EU international students included in the analysis

### and classified by world continent/region and the World Bank income-based classification

Burma	Asia
Burundi	Afri
Cambodia	Asia
Cameroon	Afri
Canada	Nor
Cape Verde	Afri
Cayman Islands	Nor
Central African Republic	Afri
Chad	Afri
Chile	Sout
China	Asia
Colombia	Sout
Congo	Afri
Congo (Democratic Republic) {formerly Zaire}	Afri
Costa Rica	Nor
Cuba	Nor
Curaçao	Nor
Cyprus (Non-European Union)	Euro
Djibouti	Afri
Dominica	Nor
Dominican Republic	Nor
East Timor	Asia
Ecuador	Sout
Egypt	Afri
El Salvador	Nor
Equatorial Guinea	Afri
Eritrea	Afri
Ethiopia	Afri
Faroe Islands	Euro
Fiji	Aust
French Polynesia	Aust
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Lower middle income Low income Lower middle income Lower middle income High income Lower middle income Low income Low income High income Upper middle income Upper middle income

Low income Upper middle income Upper middle income High income High income Lower middle income Upper middle income Upper middle income Lower middle income Upper middle income Lower middle income Lower middle income Upper middle income Low income Low income High income Upper middle income High income

Gabon	Africa	Upper middle income
Gambia, The	Africa	Low income
Georgia	Asia	Lower middle income
Ghana	Africa	Lower middle income
Greenland	Europe (non-EU)	High income
Grenada	North America	Upper middle income
Guam	Australasia	High income
Guatemala	North America	Lower middle income
Guinea	Africa	Low income
Guinea-Bissau	Africa	Low income
Guyana	South America	Upper middle income
Haiti	North America	Low income
Honduras	North America	Lower middle income
Hong Kong (Special Administrative Region of China)	Asia	High income
Iceland	Europe (non-EU)	High income
India	Asia	Lower middle income
Indonesia	Asia	Lower middle income
Iran	Middle East	Upper middle income
Iraq	Middle East	Upper middle income
Israel	Middle East	High income
Ivory Coast	Africa	Lower middle income
Jamaica	North America	Upper middle income
Japan	Asia	High income
Jordan	Middle East	Lower middle income
Kazakhstan	Asia	Upper middle income
Kenya	Africa	Lower middle income
Kiribati	Australasia	Lower middle income
Korea (North)	Asia	Low income
Korea (South)	Asia	High income
Kosovo	Europe (non-EU)	Lower middle income
Kuwait	Middle East	High income
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Kyrgyzstan	Asia
Laos	Asia
Lebanon	Middle East
Lesotho	Africa
Liberia	Africa
Libya	Africa
Liechtenstein	Europe (non-EU)
Macao (Special Administrative Region of China)	Asia
Macedonia	Europe (non-EU)
Madagascar	Africa
Malawi	Africa
Malaysia	Asia
Maldives	Asia
Mali	Africa
Mauritania	Africa
Mauritius	Africa
Mexico	North America
Moldova	Europe (non-EU)
Monaco	Europe (non-EU)
Mongolia	Asia
Montenegro	Europe (non-EU)
Morocco	Africa
Mozambique	Africa
Namibia	Africa
Nepal	Asia
New Caledonia	Australasia
New Zealand	Australasia
Nicaragua	North America
Niger	Africa
Nigeria	Africa
Northern Mariana Islands	Australasia

Lower middle income Lower middle income Lower middle income Low income Upper middle income High income

Upper middle income Low income Low income Upper middle income Upper middle income Low income Lower middle income Upper middle income Upper middle income Lower middle income High income Lower middle income Upper middle income Lower middle income Low income Upper middle income Low income High income High income Lower middle income Low income Lower middle income High income

Norway	Europe (non-EU)	High income
Occupied Palestinian Territories {formerly West Bank (including East Jerusalem) and Gaza Strip}	Middle East	Lower middle income
Oman	Middle East	High income
Pakistan	Asia	Lower middle income
Panama	North America	Upper middle income
Papua New Guinea	Australasia	Lower middle income
Paraguay	South America	Upper middle income
Peru	South America	Upper middle income
Philippines	Asia	Lower middle income
Puerto Rico	North America	High income
Qatar	Middle East	High income
Russia	Europe (non-EU)	Upper middle income
Rwanda	Africa	Low income
Samoa	Australasia	Upper middle income
San Marino	Europe (non-EU)	High income
Sao Tome and Principe	Africa	Lower middle income
Saudi Arabia	Middle East	High income
Senegal	Africa	Low income
Serbia	Europe (non-EU)	Upper middle income
Seychelles	Africa	High income
Sierra Leone	Africa	Low income
Singapore	Asia	High income
Sint Maarten (Dutch part)	North America	High income
Solomon Islands	Australasia	Lower middle income
Somalia	Africa	Low income
South Africa	Africa	Upper middle income
South Sudan	Africa	Low income
Sri Lanka	Asia	Lower middle income
St Kitts and Nevis	North America	High income
St Lucia	North America	Upper middle income
St Martin (French Part)	North America	High income

St Vincent and The Grenadines	North America	Upper middle income
Sudan	Africa	Lower middle income
Suriname	South America	Upper middle income
Swaziland	Africa	Lower middle income
Switzerland	Europe (non-EU)	High income
Syria	Middle East	Lower middle income
Taiwan	Asia	High income
Tajikistan	Asia	Lower middle income
Tanzania	Africa	Low income
Thailand	Asia	Upper middle income
Togo	Africa	Low income
Tonga	Australasia	Upper middle income
Trinidad and Tobago	North America	High income
Tunisia	Africa	Lower middle income
Turkey	Europe (non-EU)	Upper middle income
Turkmenistan	Asia	Upper middle income
Turks and Caicos Islands	North America	High income
Tuvalu	Australasia	Upper middle income
Uganda	Africa	Low income
Ukraine	Europe (non-EU)	Lower middle income
United Arab Emirates	Middle East	High income
United States	North America	High income
United States Virgin Islands	North America	High income
Uruguay	South America	High income
Uzbekistan	Asia	Lower middle income
Vanuatu	Australasia	Lower middle income
Venezuela	South America	Upper middle income
Vietnam	Asia	Lower middle income
Yemen	Middle East	Lower middle income
Zambia	Africa	Lower middle income
Zimbabwe	Africa	Low income
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