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Mikael Börjesson & Donald Broady, *The Global Space of International Students*.
Le colloque "Transnational Capital and transformation of the elites",
Université Paris 1 Panthéon-Sorbonne, les 4–6 juin 2014, 25 p.

Konferensen anordnad av forskarnätverket "Capital transnational et recomposition des élites" (eng. "Transnational Capital and Transformation of the Elites").

En senare version av detta paper med Mikael Börjesson som ensam författare publ. 2017 under rubriken "The global space of international students in 2010" i *Journal of Ethnic and Migration Studies*, 43:8, 1256-1275, DOI: 10.1080/1369183X.2017.1300228.

The Global Space of International Students^{*}

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Draft 2013-10-25

Word count: 9,789.

* This article is a result of the research project “Domestic Arenas of Internationalization. Swedish Higher Education and International Students, 1945-2015”, funded by the Swedish Research Council.

Abstract

The marginal and fragmented position of international students as research object is due for revision—not only on the basis of the overall increasing importance of international students in higher education and in national economic policies, but also since it constitutes a *strategic* research object for understanding the global landscape of higher education. By using correspondence analysis on a dataset on countries of destination and regions of origin, the global space of international students is depicted. The analysis reveals a structure with three main poles, a Pacific pole, a Central European one and a French/Iberian one. The three poles correspond to three different logics of recruitment: a market logic, a proximity logic and a colonial logic. The three poles and logics are also related to linguistic structures. The Pacific/Market pole is dominated by English, while the Central European pole has German and Slavic languages as a common denominator, and the French and Iberian pole has French, Spanish and Portuguese in common with their former colonies. It is argued that the Pacific/Market pole is the dominating pole in the space due to the high concentration of resources of different sorts, including economic, political, educational, scientific, and not least, linguistic assets.

Key words

International students, Higher education, Space, Correspondence Analysis, Bourdieu

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During the last decade, we have seen an increasing interest in international students. An obvious reason is that international students today are regarded as a key asset in the globalized knowledge economy. Many countries put emphasis on attracting the best and the brightest students on a global scale, and on making them contribute to the national economy (Abella 2006; Kuptsch 2006). Such goals are apparent in the recent migration policy launched in, for example, Australia (Ziguras & Law 2006) and the UK (Findlay 2011) where previous studies in the country increase one's chances of obtaining a work permit. A further reason is the direct economic value that international students represent (Kritz 2006:15). While tuition fees from foreign students compensate for the decreasing public funding of British higher education institutions (Bruch & Barty 1998), higher education has become one of the most important export industries in Australia (Adams 2007:411) and New Zealand (Lewis 2011). The growing attention given to international students is reflected in an increased production of easily accessed statistics on global flows of student migration.¹ Moreover, international students have become an important indicator of quality in higher education, used, for example, as a measure in higher education rankings.²

The importance attributed to international students does not lie in their share of the overall number of students, which has been rather stable over the years at around 2%. The overall size of the international student population is now (2010) between 3.6 million (UNESCO 2012:133) and 4.1 million students (OECD, 2012:360), around ten times the total number of students in countries like Belgium, Hungary or Sweden and at least a million more than the number of students in major higher education countries such as France, Germany or the UK. The number has doubled in 12 years; according to UNESCO rising from 1.6 million in 1998 to 3.6 million in 2010. Representing a substantial economic value on the education market, international students are overrepresented in the most dominant countries in education, such as the US, the UK, Germany and France. Here, they are particularly well represented at higher levels of the educational system (UNESCO 2009:44), in areas of special importance for the ability to compete on the global knowledge economy such as science and technology (Brown et al. 2011: 36–40), and at the most prestigious institutions, for example the Ivy League-universities in the US, Oxbridge in the UK (Findlay 2011:176) and some of the *grandes écoles* in France³).

Considering the increasing importance of international students and their crucial function in the global knowledge economy, it is somewhat surprising that they do not constitute a more central research object. The geographers Russell King and Parvati Raghuram note that although there is now a growing literature on the subject (see also Kehm & Teichler 2007), much remains to be done (2013:129). The existing body of literature also tends to be rather dispersed, depending on different

¹ Organizations such as OECD, UNESCO, and IIE are collecting data on international student flows and make them available on the web. In addition, many national statistical organisations provide data on nation specific flows.

² Two examples are the Times Higher Education World University Rankings, <http://www.timeshighereducation.co.uk/world-university-rankings/2012-13/world-ranking/methodology>, and the US News and Reports World University Rankings, <http://www.iu.qs.com/university-rankings/world-university-rankings/>. See also discussion in Kauppi & Erkkila (2011).

³ At the universities, international students comprise 15% of the population (Ministère de l'Enseignement supérieur et de la Recherche 2012:4), while there is 18% at the *Grandes écoles* (Conférence des grandes écoles 2011:40), and up to 42% at a leading *Grande école* as *École centrale* (<http://www.letudiant.fr/>).

conceptualizations of the object. King and Raghuram highlight three broad strands (2013:127). First, international students are often primarily regarded as a form of migration and thus related to the existing research literature on this subject. Further, they are analyzed as part of globalization in general and of higher education in particular. Finally, they are constituted as students in a particular learning situation, i.e. in a purely pedagogical perspective. We can add that international students can also be perceived as consumers of education on a global market and analyzed according to their economic value in terms of revenue from tuition fees and further spending in the country of destination, their contribution to the labor market, and, more broadly, to the national economy. How international students are understood is clearly related to academic disciplines. While economists tend to focus on the financial aspects of the international flows of students, sociologists emphasize strategies of social mobility, geographers highlight migration patterns and pedagogues put interest into learning situations, etcetera. It is arguable that within each discipline, international students are really not at the core of the topics favored in research. International students are, for example, a neglected area in migration studies (King and Raghuram: 2013:128), as well as in globalization theory (Börjesson 2005). As a result, international students as an object of research appears to be not only fragmented in the sense that it is approached in a large variety of disciplines, but also marginalized within these disciplines. This is a likely reason for the poor standing of research on international students.

The present study departs from the conviction that international students constitute a *strategic* research object for understanding the global landscape of higher education. Indeed, available data on flows of students from one country to another serves very well for getting an overall picture of this landscape, its basic structure, hierarchies and transformations. This picture provides an account of the “trade balance” between national systems of higher education. The study of international students thus opens up for a *relational* analysis of national systems. What I am referring to is not the kind of single country analyses of incoming and outgoing students that are staple goods (each national statistical agency produces such tables and charts; see Gürüz 2008 for an ambitious compilation and analyses of a wide range of countries). Rather, the aim is a synthetic analysis that depicts the whole web of relations between countries, a lacuna in the literature on international students. This article will attempt to provide such a synthetic analysis.

What is proposed is a *sociological* analysis of the global space of international students. This implies that relations of power are at the center of the analysis. The notion of space is used in the sense of the French sociologist Pierre Bourdieu, that is, as a tool for understanding social structures in a multidimensional fashion with polarities, oppositions and hierarchies. While Bourdieu primarily used the notion in his analysis of French society,⁴ the scope will here be extended to a global context,

⁴ In his conception of the French society as a social space, the individuals are distributed according to their possession of capitals, especially economic, cultural and social capitals, in a multidimensional space, where the first axis is constituted by the overall volume of capital, the second of the composition of capital, and the third of their development over time. (1979:139–144)

more precisely the global space of international students.⁵ This space is, in turn, part of a larger global space of higher education⁶, which is extremely complex. This larger space contains nation states and national systems of higher education with their institutions (i.e. higher education institutions of a large variety ranging from local polytechnics to world class universities). It further comprises national organizations (ministries of education, agencies of higher education), as well as international and transnational ones (associations of higher education institutions, accreditation associations, federations of students and teachers), and, finally, large numbers of individuals (students, teachers, researchers, administrators) who populate the space. To this, we may also add supranational stakeholders such as EU, the World Bank, UNESCO, OECD, and private companies depending on higher education for the provision of labor force, as well as various professional groups based on educational credentials.

I will, however, only analyze one aspect of this space, the sub-space of international students, using one set of actors, *the nation states*, as analytical entities. It could be argued that this is a serious limitation for an analysis of the current global higher education landscape, since, here, *institutions* tend to be the prime actor, as, for example, indicated by the numerous and influential rankings of universities or the ongoing restructuring of national systems aiming at enhancing the autonomy of the higher education institutions (Estermann & Nokkala 2009:6). However, much evidence suggests that, in the process of globalization of higher education, the nation states still form the most crucial object of analysis since they continue to provide the predominant framework for higher education; the legislation is national and so is also most of the funding and student recruitment (Marginson & van der Wende 2009:25–26; Teichler 2004:21; Brooks & Waters 2013[2011]:36–42).⁷

An alternative to “space” is “market”. For example, the authors (Marginson & van der Wende 2009) of a chapter in an OECD report on globalization of higher education refer to “the global degree markets” (18), “global university market” (20), and “global market of research-intensive universities” (35). The reason for avoiding the term “market” in the present analysis is that the term represents a political ambition that is very much at stake in the global context of international students. The notion of “space” does not have such normative connotations. As will be shown, the logic of the market is not pertinent to the whole global space.

Yet another notion that would be reasonable to use is “world system”, construed by Immanuel Wallerstein (1991) to designate the global economic landscape and identifying a center, a semi-periphery and a periphery. This approach has been applied to international student flows by Tse-Mei Chen and George A. Barnett (2000), who argue that Western countries constitute the center,

⁵ For an introduction to the use of Bourdieu in studies of international relation, see the special issue of *International Political Sociology*: “Introduction to Symposium: ‘A Different Reading of the International’: Pierre Bourdieu and International Studies” (Bigo & Madsen 2011).

⁶ A similar conception is found in Simon Marginson (2006), but Marginson draws attention to Bourdieu’s notion of “field of Power” instead of “space”. A social space does share a number of properties with social fields, yet another key concept in Bourdieu’s sociology, but is less strictly defined. Fields also function as a multidimensional structure with hierarchies and oppositions. Additionally, it requires field-specific capital, specialized institutions, a *doxa* (common set of beliefs) and *illusio* (a willingness to play the game), that are not necessary for a social space.

⁷ See Saskia Sassen (2006) for a general argument on the importance of studying the nation states in analysis of the globalization.

Eastern Europe and Asia a semi-periphery, and Africa and the Middle East a periphery (see also Barnett & Wu 1995). While there is certainly something to such an analysis, I prefer the notion of space since it does not presuppose that there actually exists only one coherent system. A “space” can contain different “systems”. Further, much of what is going in higher education does not necessarily have to be integrated into a “system”, neither regional nor global.

The article is organized in two major empirical parts. In a first step of the analysis of relationships between nation states in the global space of higher education, a very asymmetric structure is obtained when export and import of international students is considered. While some countries, such as China and India, are primarily exporting countries, others, most notably the US, the UK, Germany, France and Australia, are important countries of destination. This can be regarded as a structure of domination, in which the traditional Western powers form a center in the global higher education space and the new rising economies function as a semi-periphery.

In a second step, I continue by exploring the relations between countries in this general global hierarchy by analyzing the table of international students by country of destination and region of origin using correspondence analysis, a method developed for depicting similarities and dissimilarities in data sets. As will be shown, the analysis reveals a structure with two main dimensions within which three main poles can be identified, a Pacific pole, a Central European one and a French/Iberian one. The three poles correspond to three different logics that can roughly be labeled a market logic, a proximity logic and a colonial logic. These three poles and their corresponding logics of functioning are related to linguistic structures. While the Pacific/Market pole is dominated by Anglophone countries of destination, using English as the language of instruction, the Central European pole with its “proximity logic” has German and Slavic languages as a common denominator and the French/Iberian pole keep to French, Spanish and Portuguese.

In the conclusion, the analyses made in the first and second steps are combined in an interpretation of the structure of the global space of international student. It is argued that the Pacific/Market pole is the dominating pole in the space, due to the high concentration of resources of different sorts, including economic, political, educational, scientific, and not the least, linguistic assets.

Method and data

Data Set and Coding

The data used for analyzing the global space of international students are retrieved from UNESCO’s online databases, www.unesco.org. International students are defined as “students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin.”⁸ (UNESCO, 2012:80). According to UNESCO, international students are “commonly categorised by two operational definitions: i) a student’s country of permanent or usual

⁸ Similar data to that presented by UNESCO are also available by the OECD. The OECD data is, however, limited in one respect: they only cover OECD countries as countries of destination. The UNESCO data has for this reason been given priority.

residence; or ii) their country of prior education.” (UNESCO, 2012:80) Furthermore, some countries use foreign citizenship to indicate international students.⁹ This implies that for these countries the population of international students, according to the definition above, are overestimated since the data contains individuals who have immigrated for other purposes than studies. (OECD 2012:371). It is thus important to be cautious when interpreting national comparisons of international students.¹⁰

A further limitation is made in the UNESCO statistics by only including students aiming at degrees in the foreign country (degree mobility); short-term studies (less than a year) including exchange students (credit mobility) are excluded.¹¹ Thus the logic of exchange studies—built on a one-to-one relationship between the higher education institutions and functioning as an *addition* to the domestic degree pursued—and the logic of degree studies—not restricted by a one-to-one relationship and functioning as an *alternative* to a domestic degree—are not confused in the data. (Börjesson 2005)

Information on all countries of destination and all countries of origin for international students was chosen for the years 2010. For certain countries there were missing data for the selected year. This was handled by using data, if available, from the preceding year. For the descriptive analyzes on the number of incoming and outgoing students, the individual countries are used as the basic analytical entity. For the correspondence analysis the countries of origin have been regrouped in larger geographical regions (see below).

Correspondence Analysis—A Relational Approach

For the purpose of displaying a structure in the global space of international students Correspondence Analysis is used. Correspondence Analysis is a statistical method that efficiently reduces the complexity of a contingency table¹², thus enabling a condensed analysis of the complex data that the relations between a large set of countries of destination and fairly many regions of origin constitute. The method is the leading case of the paradigm of Geometric Data Analysis (GDA), which is defined as “the approach of Multivariate Statistics that represent multivariate data sets as *clouds of points* and bases the interpretation of data in these clouds” (Le Roux & Rouanet, 2010:1). The clouds of points are distributed in a multidimensional space, and, as Le Roux and Rouanet state, “the work of Bourdieu is exemplary of the ‘elective affinities’ between the spatial

⁹ Austria, Cameroon, Chile, the Czech Republic, Finland, France, Greece, Hungary, India, Indonesia, Italy, Japan, Jordan, Kuwait, Madagascar, Malaysia, Malta, Oman, the Philippines, Poland, Qatar, the Republic of Korea, Romania, the Russian Federation, Saudi Arabia, South Africa, the former Yugoslav Republic of Macedonia, Turkey. (UNESCO 2012:83)

¹⁰ However, the problems of comparison should not be exaggerated. There are clear differences between the countries in terms of the number of international students, and in order to increase one’s position substantially, a doubling or more is required. For the correspondence analysis, the results tend to be robust, and changes of 10–20% for single countries are unlikely to change the overall structure of the analysis.

¹¹ “The UIS’ internationally mobile student data cover only students who pursue a higher education degree outside their country of usual residence (so called ‘degree mobility’) and exclude students who are under short-term, for-credit study and exchange programmes that last less than a full school year (so called ‘credit mobility’).” (<http://www.uis.unesco.org/Education/Pages/FAQ.aspx#theme5>).

¹² “Correspondence analysis remarkably simplifies complex data and provides a detailed description of practically every bit of information in the data, yielding a simple, yet exhaustive analysis.” (UNESCO 1999:6.5)

concept of social space and GDA representations” (2004:15).¹³ Bourdieu and his collaborators have preferred GDA and used different versions of correspondence analysis for analyzing, for example, the French social space (1979), the field of humanities and social sciences (1984) and publishing houses (1999).

More precisely, Correspondence Analysis produces two clouds of points, one for the rows of the table and one for the columns. This fits very well with the logic of the global space of international students, where there are large differences between the countries of destination and the countries of origin, which will be presented as two different clouds (although projected in the same space). We can thus study the structure of the countries of destination separately from the countries (or regions) of origin and examine the relation between the two sets. This implies that we can join the two main strands of analysis of international students, the one on the demand side and the one on the supply side (Findlay 2011), in one and the same analysis.

The Flows of International Students

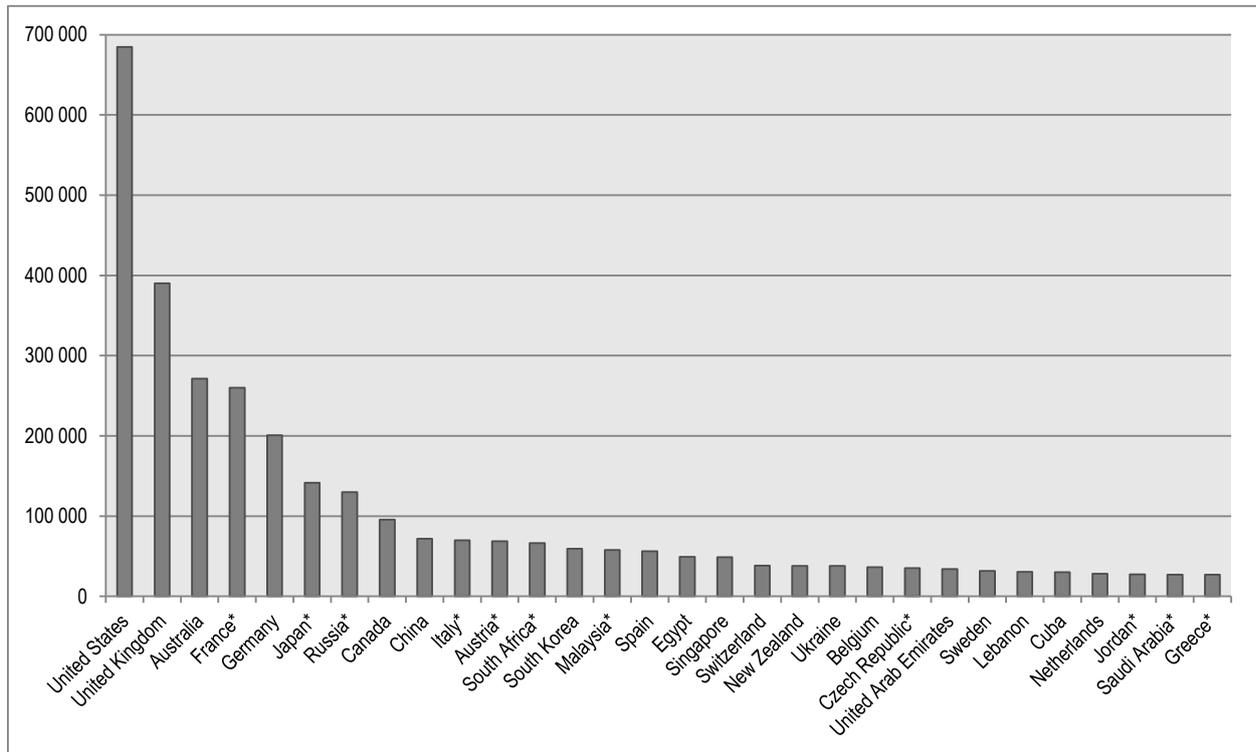
This section presents the most general statistics, the distribution of international students on countries of destination and origin. I will focus on the situation in 2010 and give a structural account; the trends in recruitment are omitted for reason of space limitation.

Countries of Destination: Domination of a Few, Wealthy, Anglophone Countries

The global flows of international students are concentrated towards a handful of countries. In 2010, the US was the most important destination, hosting 685,000 international students, or 19% of the whole population, followed by the UK with 390,000 international students (11%) and Australia with 271,000 (8%). The top three countries thus equal 38% of the whole population. By adding the fourth and the fifth country, France (260,000 and 7%) and Germany (201,000 and 6%), more than half of the international student population is represented (51%). Adding an additional five countries (Japan, Russia, Canada, China and Italy) gives a share of 65%, the top 20 account for 80% and the top 30 for 88%. Among the 30 most important destinations European countries represent 40% of the international students, America 23%, Asia 14%, Oceania 9% and Africa 3%. Language-wise, English dominates strongly with 46% among the top 30, while no other language reaches over 10% (French 8.9%, German 8.0%, Arabic 4.7%, Japanese 4.0%, and Russian 3.6%).

¹³ On Bourdieu’s use of and relation to correspondence analyses, see Bourdieu (1991[1968;1973]); Lebaron (2012); Rouanet, Ackermann & Le Roux (2000).

Figure 1. The 30 Largest Countries of Destination, 2010. Sorted Decreasing by Number of International Students.

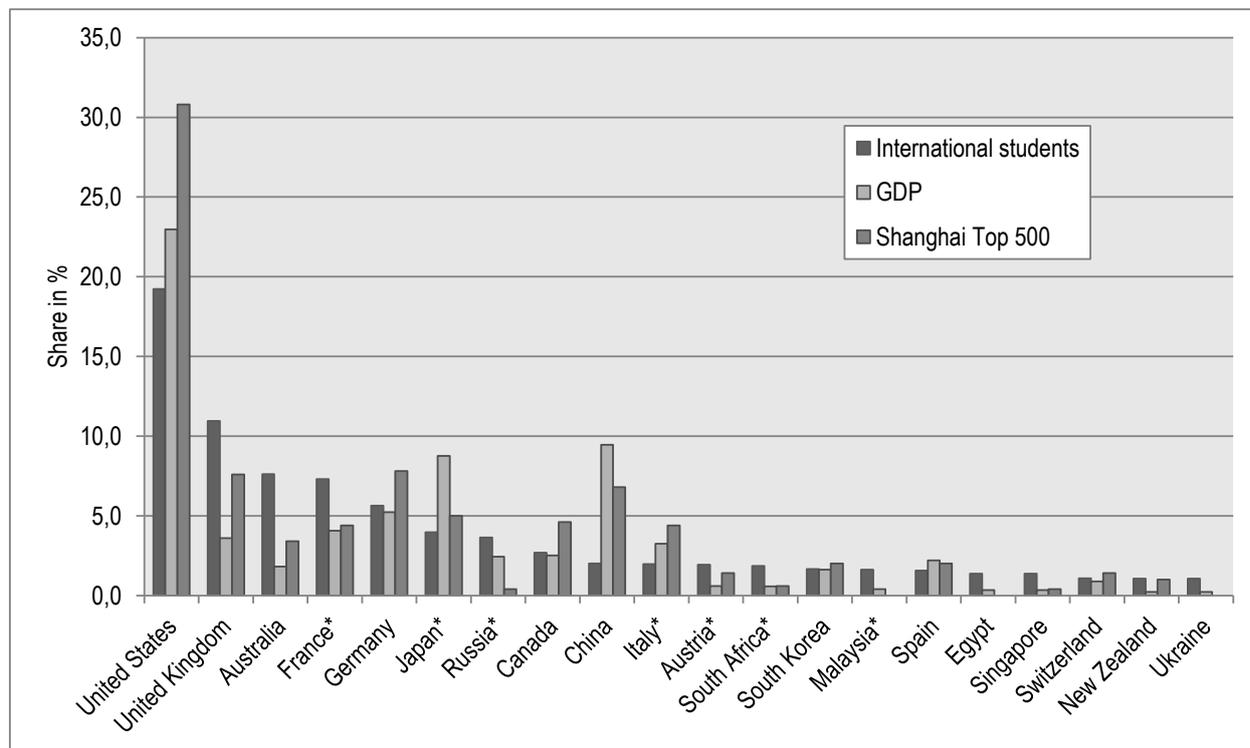


Source: UNESCO. Remark: * Country using foreign citizenship as indicator.

There is a strong relationship between the national economy and position in the ranking of countries of destination (see Figure 2). The prime country of destination, the US, is also the by far the largest national economy. Among the top 10 countries of destination, we count eight of the largest economies (only India and Brazil are not among the ten largest countries of destination).¹⁴ There exists also a clear link between the country's attraction as a destination for international students and the country's position in international rankings of universities, here indicated by the number of universities among the top 500 of the most spread ranking, the Shanghai ranking, in 2010 (see Figure 2). The US has the highest number of universities among the 500 highest ranked, 154 equaling 31%, followed by Germany and the UK with 39 and 38, representing 8% each. Among the ten highest countries in the Shanghai ranking, nine are among the ten with the largest population of international students (only the Netherlands is not among the most popular destinations and Russia is number 25 according to the Shanghai ranking).

¹⁴ Data on Gross Domestic Product is retrieved from the World Bank, <http://www.worldbank.org/>.

Figure 2. The 20 Largest Countries of Destination, Gross Domestic Product and Position in the Shanghai Ranking, 2010. Share in Percent. Sorted Decreasing by Number of International Students.



Sources: UNESCO, The World Bank, The Academic Ranking of World Universities (Shanghai Ranking). Remark: * Country using foreign citizenship as indicator of international student.

From Figure 2 we can also analyze the relation between economic, linguistic and educational factors and notify some different patterns. The US dominant position is evident with regard to all factors. The country has the leading position according to number of international students, share of the world GDP and number of top ranked universities. However, it is noteworthy that its share of the international student population is smaller than its share of the GDP and of top ranked universities. The three following countries (the UK, Australia and France) have an opposite profile, with larger shares of international students than of the global GDP and the number of top ranked universities. For Germany its number of international students matches its share of GDP, but it has a better position according to its Shanghai ranking, while Japan and especially China has a far better economic position than by its number of international students. It is also apparent that the spoken language of the country of destination has an impact, where English functions as a trump card, explaining the forward position of Australia (number 3; while number 13 according to GDP) and to some extent also the UK (number 2, but number 6 by GDP).

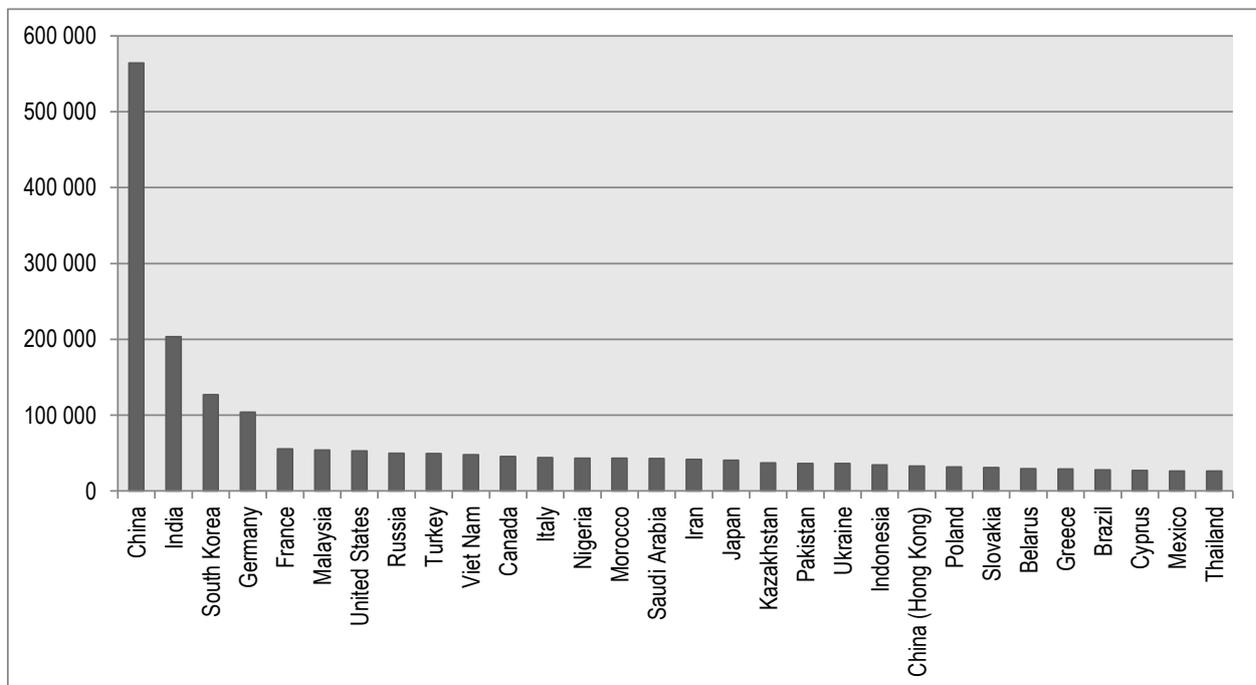
Countries of Origin: Large Geographic, Linguistic and Economic Diversity

The international students' countries of origin differ in many respects from their countries of destination. First, they are not as concentrated as the countries of destination. While the top 5 of the countries of destination have more than 200,000 international students, only two countries of origin, China and India, reach over that figure. The top 5 of the countries of origin represent only 33% of the total number of international students, as compared to the 51% for the countries of destination;

for the top 10 the relation is 41% versus 65% and for the top 30 63% against 88%. This implies that the international students although concentrated to a small number of countries of destination are coming from a larger number of countries of origin. The demand for higher education is global, but the offer is concentrated to the larger and more economically powerful countries.

The list of the largest countries of origin differs in certain respects from the list of the largest countries of origin. There is a large dominance of Asian countries. The first three countries are Asian: China 564,000 and 18%, India 203,000 and 6% and South Korea 127,000 and 4%, and represent almost one out of three international students (28%). Among the top 10 countries there are 5 Asian (representing 31% of all international students) and among the top 30 there are 13 Asian (40%). The second largest region, Europe, is far from Asia counting 4 countries among the top 10 representing 8% of all international students and 11 countries in the top 30 (15%).

Figure 3. The 30 Largest Countries of Origin, 2010. Sorted Decreasing by Number of International Students.



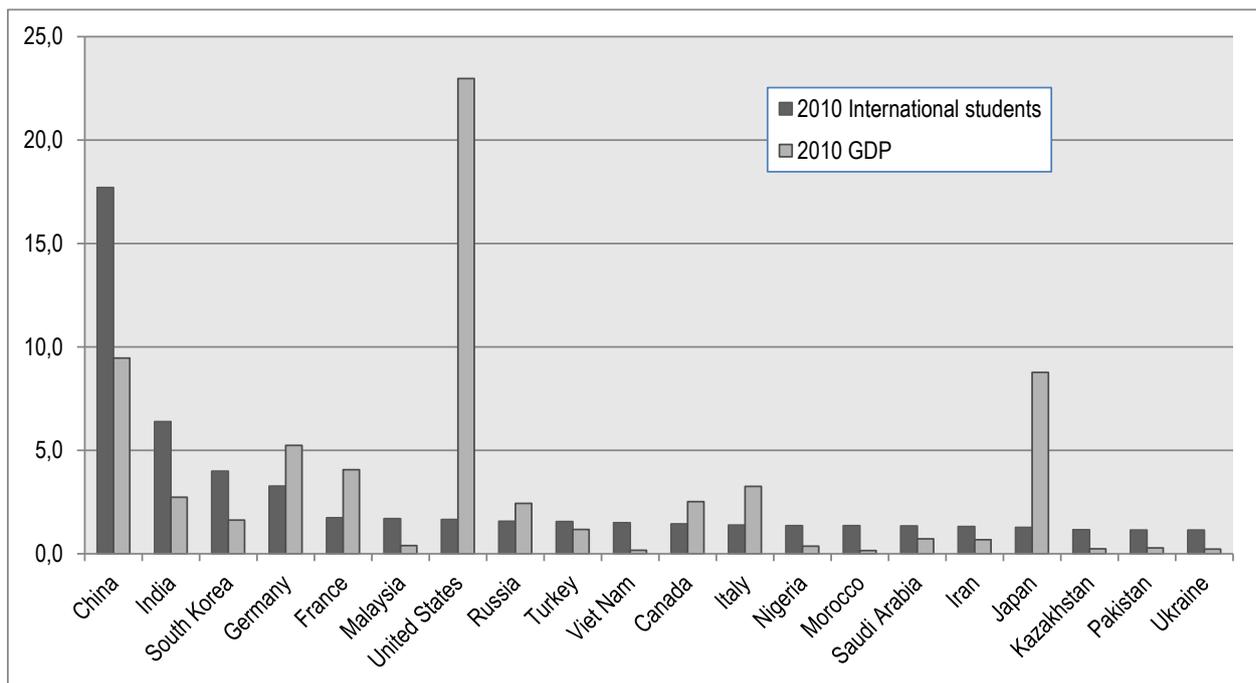
Source: UNESCO.

While the countries of destination are dominated by Anglophone countries, these countries occupy less important positions among the countries of origin. The top 10 only include one such country, the US, with 53,000 international students sent out representing 1.7%, which can be compared to the 685,000 incoming students, representing 19%. The UK, the second largest country of destination, is found at position 37 with 24,000 international students (0.7%) and Australia, the third largest country of destination, is number 73 with 10,000 international students (0.3%). The modest positions of the Anglophone countries can be contrasted to both Germany and France that are positioned as number 4 and 5 with 104,000 (3.3%) and 55,000 (1.7%) students abroad. The countries of origin are not only characterized by the weak position of the Anglophone countries, but also by the great variety of the languages spoken. Among the top 30 we can count 21 different

official languages that have a share of at least 1%. Beside Chinese with 19% and Hindi with 6% no other country has more than 5%. But to get a more complete understanding of the importance of the languages it is necessary to analyze the linguistic patterns according to a geopolitical logical and take into account the second languages spoken as results of colonization or other modes of domination. By including former British colonies such as India, Malaysia, Hong Kong, and Cyprus, English strengthens its position significantly and reaches 15%. To this countries such as South Korea and Vietnam might be added as part of the American zone of influence, which means another 6%. Also French improves its position from 2 to 5% when former colonies (Morocco and Vietnam) are included. Furthermore, by adding former parts of the Soviet Union, Russian increases from 2 to 5%.

Economic factors are also important for the countries of origin for understanding the position of the countries (see Figure 4), but the relation is less clear-cut than for the countries of destination. Larger economies are represented among the top positions. At the top 10 there are 5 countries among the 10 largest economies in the world (China, India, Germany, France and the US), but Japan, the second largest economy, is together with Canada and Italy first among the top 20, Brazil in the top 30 and the UK at position 37.

Figure 4. The 20 Largest Countries of Destination, and Gross Domestic Product, 2010. Share in Percent. Sorted Decreasing by Number of International Students.



Sources: UNESCO, The World Bank.

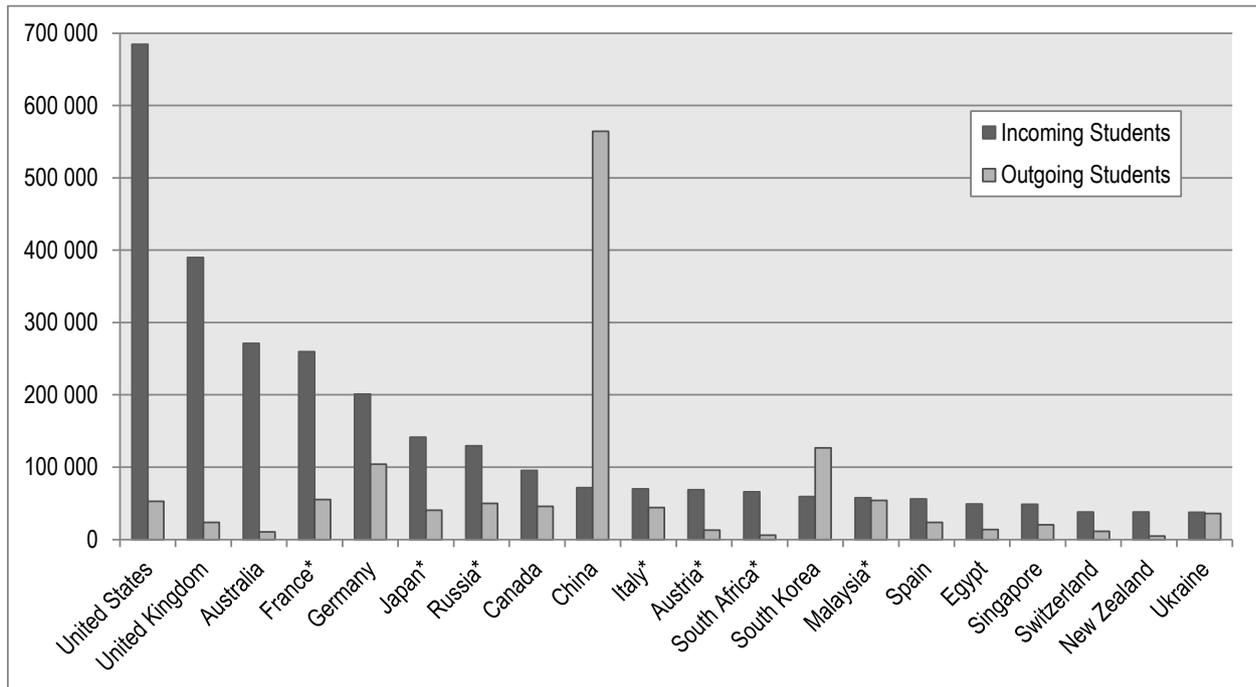
Exporters and Importers—A Relation of Domination

By studying the overall numbers of international students by countries of origin and of destination, it is obvious that the flows follow certain patterns. The international students originate from a large number of countries, especially Asian ones, and gravitate towards a few, wealthy and mostly

English-speaking countries. We can interpret this basic structure in terms of domination and power. Using the perspective of World System Theory one might argue, following Chen and Barnett (2000), that the Western countries constitute the center, Eastern Europe and Asia a semi-periphery, and Africa and the Middle East the periphery. Considerable evidence supports this analysis. The Western countries have a disproportionately large share of the total number of international students. They also represent scientific powers, as indicated by their high share of universities in rankings of higher education institutions. Furthermore, these countries are traditional global economic and political powers. The analyses of flows of international students and talent from the semi-periphery and periphery to the center are related to the vast literature on “brain drain” and “brain gain”, where the center gains and the periphery loses (Robertson 2006). However, there are also reasons to question a too simplified understanding of the World System Theory. Today, the semi-periphery has become increasingly important and Asian countries, including the giants China and India, invest heavily in building a World class university system (Brown et al 2011:30–35). From the perspective of migration, it is more common to speak of “brain circulation” and Asian countries also set up programs for retaining their international students (Brooke & Waters 2013[2011]:59). What we are witnessing is probably the rise of a more complex World system of higher education with increased competition for positions at the center, a more important semi-periphery functioning to a larger extent as an intermediary position between the center and the periphery, and a growing periphery.

The degree of centrality of a country in the global space of higher education is not only dependent on the inflow of students, but also on the outflow as well as the relation between the two. In a study of translations as a world system, Johan Heilbron (2000) notes that the more central a language is in the system, measured as the proportion of the source language in translations, the less it translates from other languages. English holds a hyper-central position in the system, while around 40% of all translations in the world are from English, translations only account for 5% of all publications in the UK and the US. Similar patterns can be found for exporters and importers of international student. Among the 20 largest countries of destination, the first three countries, the US, the UK and Australia, all host a considerably larger share of all international students than they send out. For the US, the relation is 1 outgoing to 13 incoming, for the UK 1 to 17 and for Australia 1 to 27. The only other countries with such extreme relations are South Africa, 1 to 11, and New Zealand, 1 to 8—two countries that are also Anglophone. The central position of English-speaking countries has to be understood in relation to the dominant position of English in the world, being the largest language and the *lingua franca* for economy and science (Crystal 2003). These extreme relations can be compared with the fourth and the fifth countries, France and Germany, whose figures are 1 to 5 and 1 to 2. Among the 20 largest countries, only two have a larger number of outgoing than incoming students, China and South Korea. For China, the figure is almost as extreme as for the English speaking countries, although in a reversed sense, 8 outgoing per incoming, while the relation for South Korea is 2 to 1. The overall pattern of more incoming than outgoing students, most pertinent for the most important countries of destination, underlines the basic structure of dominance, where the countries of destination dominate over the countries of origin.

Figure 5. The 20 Largest Countries of Destination, Number of Incoming Students and Outgoing Students, 2010. Sorted Decreasing by Incoming Students.



Source: UNESCO. Remark: * Country using foreign citizenship as indicator of international student.

The Global Space of International Students

The analysis has hitherto been based on the total number of international students for countries of destination and countries of origin. The next step is to analyze the specific recruitment patterns for the countries of destination (which countries their international students come from) in order to lay out the structure of the countries of destination and of the countries of origin on the basis of the relation between the two sets of countries. The preferred statistical method here is Correspondence Analysis, which is developed to study structures in contingency tables, in our case a cross table produced by UNESCO of countries of destination and of countries of origin. The original table of 205 times 205 countries (in total 42,025 cells) contains 30,917 empty cells (there is no information on international students for 96 countries of destination) and needed to be radically condensed. Since the international students are concentrated towards a few countries of destination and spread over a large number of countries of origin, the strategy has been to focus on the countries of destination. Out of the 109 countries with information on international students for the year 2010¹⁵, 28 have been chosen that meet the following criteria: 1) substantial numbers of students (more than 10,000), 2) good information on the origin on the international students¹⁶, and 3) no extreme

¹⁵ For Canada no data are available for 2010 and the data for 2009 have been used.

¹⁶ This disqualifies countries such as China, Singapore, Egypt and Lebanon, where no information on countries of origin exists.

distribution of international students on countries of origin¹⁷. The 28 chosen countries recruit 83% of all international students (90% of the students with specified countries of origin). The countries of origin have been grouped in 13 larger geographical regions (see Appendix). All international students recruited by any of the 28 countries of destination active in the analysis are included in the total of 13 categories of countries and regions of origin. Thus 83% of all international students are accounted for in the analysis.

The correspondence analysis results in a cloud of points with 12 dimensions (see Table 1 in online Supporting Information), where the first axis accounts for the largest part of the variance, 36.3%, the second axis the next largest part of the variance, 17.2%, the third 11.9%, the fourth 10.7%, and the fifth 7.4%. I have chosen to interpret and discuss the first four axes, which together represent 68.2% of the total variance, and focus especially on the first two dimensions, that constitute almost half of the variance, 45.6%. In order to interpret the axes will be analyzed one by one. For the interpretation of each axis, I look at the contribution exceeding the average contribution of the countries of destination ($100/28=3.6$ per cent) and of the regions of origin ($100/13=7.7$ per cent).

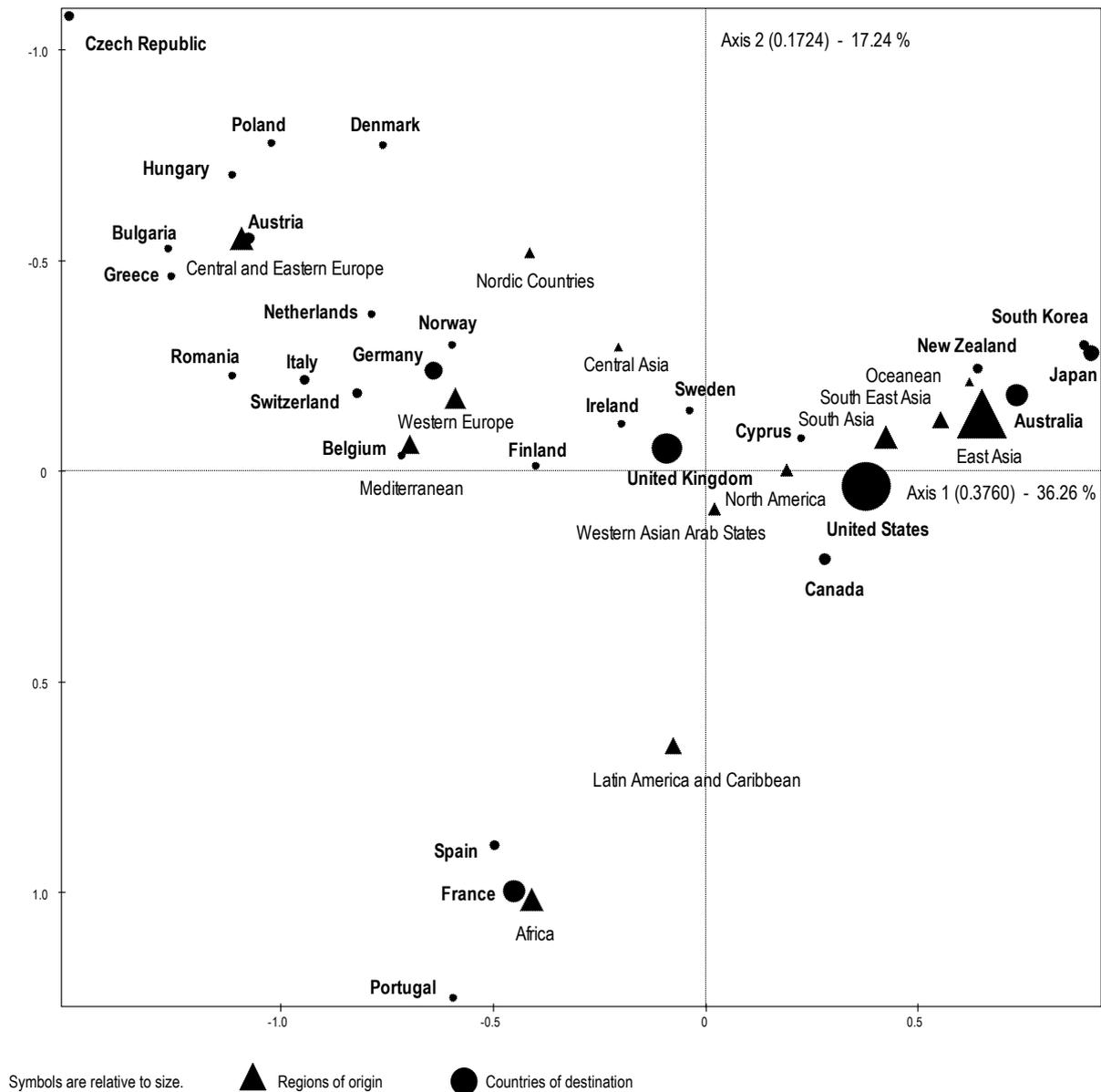
A Four-Dimensional Space

Axis 1: Europe vs. the Pacific Region

The first and most important axis (see Figure 6 and Table 2 and 3 in online Supporting Information) separates European countries of destination (left in the figure) from countries of destination located in the Pacific Region (right side of the figure). The highest contributions are associated with Austria, the Czech Republic and Germany on the left side and Australia, Japan and the US on the right side. For the regions of destinations we find corresponding opposition between Central and Eastern Europe and Western Europe (to the left) and different Asian regions, East Asia including China being by far the most important (to the right). Notably is also that North America, Western Asian Arab States, and Latin America and the Caribbean are positioned at the center of the first axis.

¹⁷ This is applicable to, for example, South Africa, where all of the total 48,000 international students come from Africa, and Russia, where 56,000 come from Central Asia and 39,000 from Central and Eastern Europe out of a total of 130,000 international students. The correspondence analysis is sensitive to extreme values and gives large weight to such particular recruitment pattern, which hides the overall structure.

Figure 6. The Global Space of International Students in the Plane of Axes 1 & 2.



Axis 2: France and Spain and vs. the Rest of Europe

Among the countries of destination the second axis (see Figure 6 above and Table 2 and 3 in the online Supporting Information) sets especially France but also Spain and to some extent Portugal (at the bottom of the figure) in opposition to the rest of the European countries, with the Czech Republic and Austria having the highest contributions to the axis, and some Asian countries (at the top of the figure). This corresponds to an opposition among the regions of origin with first and foremost Africa but also Latin America and the Caribbean associated with France, Spain and Portugal, and Central and Eastern Europe at the European pole.

Axis 3: Western Europe vs. Central and Eastern Europe

Along the third axis (see Figure 7 below and Table 2 and 3 in online Supporting Information), a further division of the European countries appears, with the Netherlands, Switzerland, Belgium,

Austria and the UK as countries of destinations attracting students from other Western European countries (at the top of the figure) and Czech Republic, Italy and France as countries of destination associated with Central and Eastern Europe, Central Asia, and Africa as regions of origin. This can be interpreted as a correction of the left pole, the Central European, along the first axis, stressing that among the European countries there is a particular strong affinity between Western European countries, setting them apart from other regions of Europe.

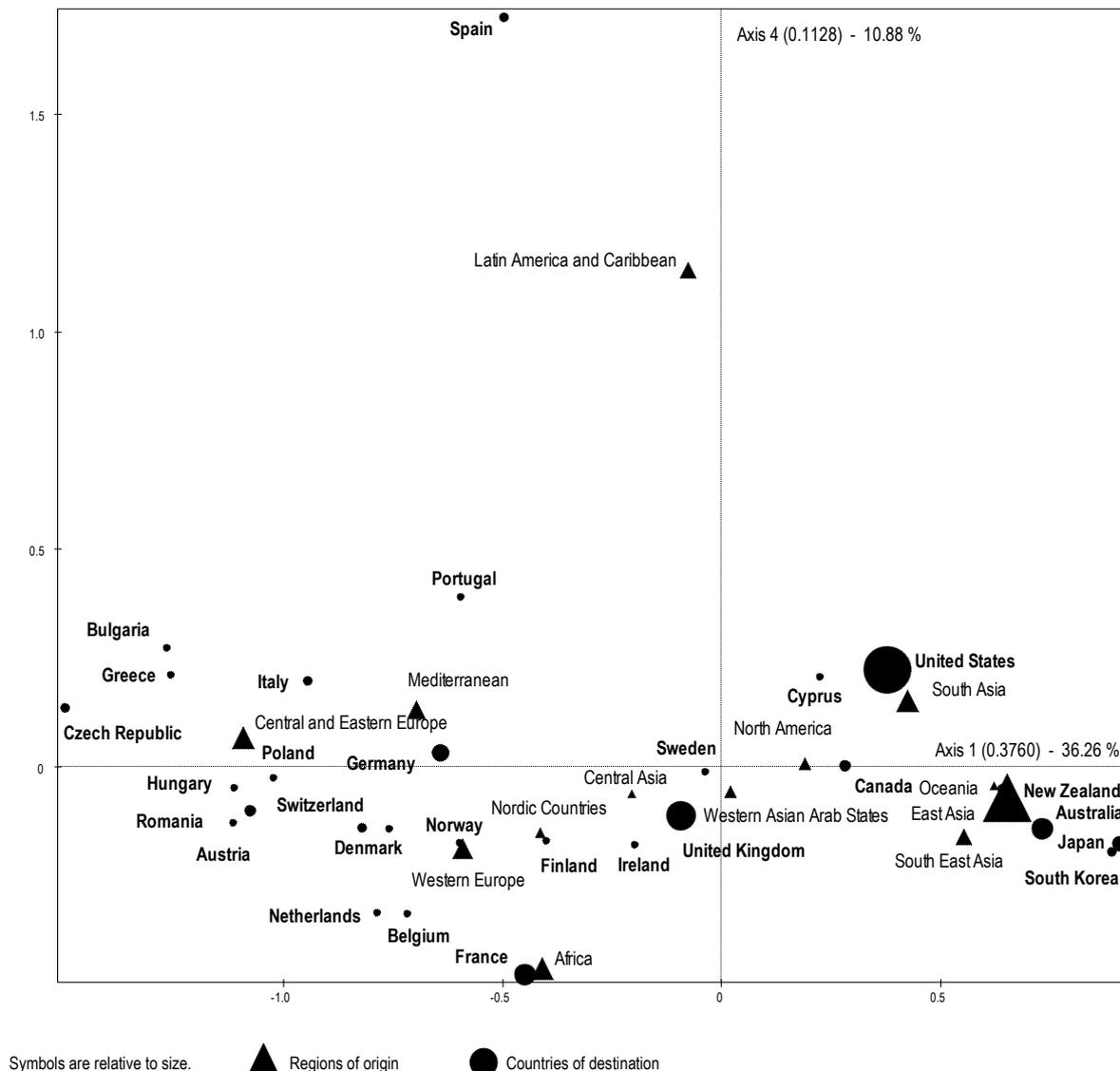
Figure 7. The Global Space of International Students in the Plane of Axes 1 & 3.



Axis 4: Spain vs. France

While the third axis can be regarded as a correction of the European pole of the first axis, the fourth axis might be seen as a modification of the second axis and the pole constituted by France and Spain as countries of destination. The second axis separates France and Spain from the rest of the European countries due to their strong recruitment from other regions than Europe, and the fourth axis clarifies that France and Spain have very different external recruitment patterns, positioning the two countries in a clear opposition to each other along the axis. At the Spanish pole, the US also makes a strong contribution to the axis, and Latin America and the Caribbean function as the most important region of origin. France is most clearly associated with Africa as a region of origin.

Figure 8. The Global Space of International Students in the Plane of Axes 1 & 4.



A Three-Polar Structure

The correspondence analysis reveals that the global space of international students has a basic three-polar structure as displayed in the plane of the first two axes (see Figure 6 above). To the right we find *the Pacific pole*, with both the country of destination hosting most international students, the US,

and the country of origin sending most students abroad, China (which is dominating the East Asian region of origin). Along with the US, also Australia, Japan and South Korea occupy positions as important countries of destination, attracting students from Asian countries. In the space, the Pacific pole is distinct from two European poles to the left in the figure. The first one, which we can label *the Central European pole*, is situated at the upper left quadrant and comprises Central and Western European countries drawing their international students predominantly from neighboring countries. The second pole is located at the bottom of the figure and contains three countries of destination, France, Spain and Portugal, and two regions of origin, Africa and Latin America and the Caribbean. With respect to the countries of destination, this pole can be labeled *the French-Iberian pole*. So far we have considered the first and second dimensions of the space of international students. The third and the fourth axes function as correction to the basic three-polar structure revealed by the two first axes. Along the third axis the European countries are divided according to whether they primarily recruit students from Western Europe or from Central and Eastern Europe. The fourth axis highlights that France and Spain have very different recruitment patterns.

Market, Colonial and Proximity Logics

The three poles clearly visible in the space can be argued to represent three different logics of recruitment in the global space of international student flows. Among the countries of destination that constitute the Pacific group, we find the countries that most clearly organize their higher education systems according to a *market logic*, i.e. the US, the UK, Australia and New Zealand. Characteristic of these countries is that international students (as well as national students) are subject to tuition fees, for certain universities quite substantial ones, and that international students represent important revenue for higher education institutions, and in the case of Australia, for the whole country (in the vast literature on the marketization of higher education, see, for example, Bok 2003; OECD 2004; Gürüz 2008; Robertson 2010.) Within this group, the geographical distances are quite large. The countries of destination extend over the whole globe, from the US and Canada in North America, the UK, Ireland, Cyprus, and Sweden in Europe, to South Korea and Japan in Asia, and Australia and New Zealand in Oceania. Even though the countries of origin are somewhat less global, covering Asia and Oceania, it is reasonable to associate this large global spread to the market logic that characterizes this pole.

Along the first axis, the market pole is opposed to a Central European pole, the most distinctive mark of which is a *proximity logic*. The countries constituting this pole are fairly close to each other geographically. Indeed in the Euclidean space described previously they position themselves according to their geographical location: the Eastern European countries are grouped together in the upper left quadrant, while the Western European countries are situated more centrally in the space. This geographical logic of proximity is also expressed in the Bologna process, launched by a vast majority of European countries with the aim of creating a European area of higher education by standardizing the national systems according to a supra-national model. A particularly important condition for an extensive intra-mobility in this region of the space is that EU citizens are not charged any extra tuition fees other than those for national students, and that many countries have no fees at all or very low fees by an international comparison. This stands in clear contrast to the market logic of the countries at the opposing end of the first axis. However, many European

countries are introducing substantial tuition fees for non-EU citizens, creating a dual system where non-EU citizens are recruited according to a market logic while EU citizens are not.

At the third pole, the French/Iberian, defined by France, Spain and Portugal as countries of destination and African, Latin American and Caribbean countries as regions of origin, a *colonial logic* is expressed. Here former colonial powers still attract large numbers of students from their ex-colonies. This logic differs from the market logic in several respects. While a strict market logic does not take into consideration the national origin of the students as long as they are qualified to be admitted and have sufficient economic means to pay the tuition fees, national links are given particular importance in the colonial logic. Former colonies and the colonial power are closely related to each other in an asymmetrical power relation. While the higher education system in the country of origin is often modeled on the system of the colonial power, as in the case of the less prestigious replicas of France's *grandes écoles* found in former French colonies, national elites have historically sent their offspring to the universities of the metropolis. Further, economic mechanisms are not the same. While the market logic is based on paying customers, the colonial logic often regards tuition fees as an obstacle which is replaced by different systems of financial aid aimed at strengthening the ties with the former colonies (Åkerlund 2012).

Language Patterns: A Space Defined by English, French and German

The understanding of the global space of international student migration needs to include the aspect of language. Obviously, the language spoken in the countries of destination and countries of origin, respectively, has a large impact on the relation between the two sets of countries. This is apparent in the three poles that are identified. The countries of destination in the Pacific pole are to a large extent Anglophone. All countries where English is the national language are located at this pole (the UK, the US, Ireland, Australia and New Zealand) and 41% of all international students are studying in the countries using English as the primary language of instruction that defines the Pacific pole. However, English is not the national language in the predominately Asian countries of origin associated with the Pacific pole, which indicates that most of the international students have English as a second language at the best. At the Central European pole, Germanic and Slavic languages are most common, both among the countries of destination and origin. Countries with German as language of instruction assemble the largest number of international students and dominate the pole language-wise, comprising 8% of all international students. The French/Iberian pole is defined by the languages of the countries of destination, that is, French, Spanish and Portuguese, languages that were, at the time, the colonial languages and still are important in the country of origin. At the pole, French is most spread language (7%).¹⁸

We can also conclude that the languages are closely related to the different logics operating in the global space of international students. The market logic is strongly associated with English as a language of instruction. Being the largest language in the world, and according to David Crystal

¹⁸ Spanish only comprises 1.6% and Portuguese 0.3%. French is also spoken in Canada associated with the Pacific pole and in Belgium and Switzerland at the Central European pole, but in all three cases French is spoken by a minority, and the countries' position in the space is more in line with the logic of the largest languages (English, Dutch and German).

constituting the first global language (2003), English has also become the *lingua franca* of the academic world. Offering education in English thus opens up for the vastest public and a truly global recruitment. If English is also the main language of the country of destination, as is the case for the US, the UK and Australia, it is possible to offer to international students a perfect environment for the acquisition of English as a second language. This is one reason why the US, the UK and Australia are the most important countries of destination. In 2010, these three countries hosted 1.3 million international students, or 38% of the total international student population. The position of the UK and the US as countries at the center of the space indicates the particular global recruitment pattern of these two countries: they attract students from all over the world. Obviously, language is a key issue also in what is named a colonial logic. The language of the colonial power was most often both the administrative language and the language of instruction in the educational system of the colony. Consequently, French, Spanish and Portuguese define the language of instruction of the French-Iberian colonial pole. The influence of the colonial power is not limited to the question of the language. As previously noted, the whole education system has often been shaped after the model of the colonial power and follows a similar curriculum. In this sense, the education system of the former colony can be said to partly function as a subsystem to the education system of the colonial power. For the Central European pole, finally, languages are equally important, but follow the proximity logic of being close and overlapping: While Germany, Austria and Switzerland have German as a common denominator, Dutch is spoken in the Netherlands and Belgium, and the Scandinavian countries all more or less understand each other's languages.

Conclusion

I have argued that the marginal and fragmented position of international students as research object is due for revision—not only on basis of the overall increasing importance of international students in higher education and in national economic policies, but also since it constitute a *strategic* research object for understanding the global landscape of higher education and especially for grasping the *relations* between nation states and their demand and supply of higher education. A standard analysis of the flows of international students exposes a clearly asymmetric structure. Some countries, especially China and India, are primarily exporting countries, and others, most notably the US, the UK, Germany, France and Australia, are importing countries. To take the analysis one step further and display the total set of relations between countries of destination and regions of origin, a correspondence analysis was performed. The analysis reveals a structure with three main poles, one Pacific pole, one Central European and one French/Iberian. The three poles correspond to three different logics of recruitment that can roughly be labeled a market logic, a proximity logic and a colonial logic. The three poles and logics are also related to linguistic structures. The Pacific/Market pole is primarily constituted by Anglophone countries of destination with English as language of instruction, while the Central European pole with its proximity logic have German and Slavic languages as a common denominator, and the French and Iberian pole have French, Spanish and Portuguese in common with their former colonies.

To take the interpretation of the space yet another step further, it is necessary to integrate the basic analysis of the total volume of international students and the exposed asymmetry between the countries of destination and the countries of origin, in which the former dominate the latter, with the multidimensional analysis the space of international student flows produced by the

correspondence analysis. The latter analysis reveals the structure of the relations between countries of destination and regions of origin, but the power relations between the two categories of countries and within each category is not immediately given by the output of the analysis. Adding the dimension of power relations to the structure of the space of international students, it is arguable that the Pacific/market pole is the dominating position in the space. There are several indications of dominance. First, at the Pacific/market pole we find the most important countries of destination, the US and the UK, which together gather three out of ten international students, paired with the two largest regions of origin, East Asia, including China, and South Asia, comprising India, which taken together represent four out of ten students. Second, the US and the UK are also dominant with regard to their positions in academic rankings. Among the 100 highest ranked universities according to the Shanghai ranking in 2010, the US has the highest number with 54 followed by the UK with 11, more than the double number of the third place, Germany and Japan with 5 each. Third, the dominating position of the US and the UK is furthermore underlined by the advantage of having English as a primary language and language of instruction, as English today, according to David Crystal (2003), functions as the only truly global language, and as the only hyper-central language in the World system of languages in the terminology of Abram de Swaan (1993). Fourth, both the US and especially the UK can draw on multiple logics in their recruitment of international students. Both countries have highly market-oriented educational systems, well-adapted to meet demands of a global demand for higher education. The UK also has a wide range of colonial ties extending across the whole globe and the US has far reaching geopolitical connections. In addition, the UK holds the advantage of being positioned in Europe, giving a proximity to flows of international students from more than 50 European countries.

The dominant position of the US and the UK can thus not be reduced to one factor, but is only comprehensible from the perspective of the multidimensional space where a number of assets, such as economic, political, educational, scientific and linguistics, coincide and reinforce each other to produce the dominant position. The two other identified poles in the space (the Central European and the French/Iberian) are defined in relation to the dominant pole and do not possess a matching accumulation of assets. They have smaller amounts of economic, political, educational and scientific resources and language-wise they are dependent upon languages that are widely spoken, but not global, thus restricting the recruitment possibilities in comparison with Anglophone countries.

Finally, I would like to argue that drawing on a combination of basic descriptive statistics and the multidimensional method of correspondence analysis on data of international student flows has been productive for representing a particular aspect of the global space of higher education, namely the relations between national educational systems. It has been possible to both display the structure of these relations and analyze them in terms of power and assets. Still, much remains to be done. The presented analyses all focus on the state of the space in 2010. It is clear that the space is a product of history, where traditional ties between countries are important for establishing the structure. At the same time, the space is constantly restructured, new powers arise, and old diminish, which calls for additional analysis of former states of the space and time series analysis of its transformations.

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Appendix

Table 1. Eigenvalues, percentages, and cumulated percentages for axes 1–12.

Axes	Eigenvalue	Percentages	Cumulated percentages
1	0.376	36.3	
2	0.179	17.2	53.5
3	0.132	12.8	66.3
4	0.113	10.9	77.1
5	0.079	7.6	84.7
6	0.062	5.9	90.7
7	0.041	3.9	94.6
8	0.026	2.5	97.1
9	0.016	1.5	98.6
10	0.008	0.8	99.4
11	0.004	0.4	99.8
12	0.002	0.2	100.0

Table 2. Coordinates and Contribution of Countries of Destination to the Axes 1 to 4.

Axis 1		Axis 2		Axis 3		Axis 4					
Coord.	Ctr.	Coord.	Ctr.	Coord.	Ctr.	Coord.	Ctr.				
Austria	-1.07	8.3	Czech Republic	-1.08	8.9	Czech Republic	-1.17	14.3	France	-0.48	19.6
Czech Republic	-1.50	8.2	Austria	-0.55	4.6	Italy	-0.58	6.1	Australia	-0.15	1.9
Germany	-0.64	7.8	Japan	-0.28	2.4	France	-0.23	3.9	United Kingdom	-0.11	1.8
Italy	-0.94	5.7	Poland	-0.78	2.4	Germany	-0.23	2.8	Japan	-0.18	1.6
France	-0.45	5.1	Germany	-0.24	2.2	Japan	-0.24	2.4	Netherlands	-0.34	1.1
Greece	-1.26	4.3	Denmark	-0.77	2.2	Poland	-0.63	2.1	South Korea	-0.20	0.8
Switzerland	-0.82	2.6	Australia	-0.18	1.8	Greece	-0.49	1.9	Belgium	-0.34	0.7
Hungary	-1.11	2.0	Hungary	-0.70	1.7	South Korea	-0.30	1.6	Switzerland	-0.14	0.3
Poland	-1.02	1.9	Greece	-0.46	1.2	Romania	-0.57	1.3	Austria	-0.10	0.3
Netherlands	-0.78	1.8	South Korea	-0.30	1.1	Bulgaria	-0.50	0.7	Finland	-0.17	0.1
Romania	-1.11	1.7	Netherlands	-0.37	0.8	Australia	-0.07	0.4	Norway	-0.18	0.1
Bulgaria	-1.26	1.7	Bulgaria	-0.53	0.6	Hungary	-0.26	0.3	Ireland	-0.18	0.1
Spain	-0.50	1.4	Italy	-0.21	0.6	Finland	-0.27	0.3	Denmark	-0.15	0.1
Denmark	-0.76	1.0	New Zealand	-0.24	0.5	Denmark	-0.02	0.0	Romania	-0.13	0.1
Belgium	-0.72	1.0	Switzerland	-0.18	0.3	Portugal	-0.01	0.0	New Zealand	-0.05	0.0
Norway	-0.60	0.5	Norway	-0.30	0.3				Hungary	-0.05	0.0
Portugal	-0.59	0.4	United Kingdom	-0.05	0.2	Norway	0.00	0.0	Poland	-0.03	0.0
United Kingdom	-0.09	0.3	Romania	-0.22	0.1	Cyprus	0.06	0.0	Sweden	-0.01	0.0
Finland	-0.40	0.2	Sweden	-0.14	0.1	Sweden	0.10	0.1			
Ireland	-0.20	0.0	Ireland	-0.11	0.0	United States	0.03	0.1	Canada	0.00	0.0
Sweden	-0.03	0.0	Cyprus	-0.08	0.0	Canada	0.10	0.3	Germany	0.03	0.1
			Belgium	-0.03	0.0	New Zealand	0.17	0.3	Cyprus	0.21	0.2
Cyprus	0.23	0.1	Finland	-0.01	0.0	Spain	0.17	0.5	Czech Republic	0.13	0.2
Canada	0.28	0.7			Ireland	0.56	1.1	Bulgaria	0.27	0.3	
New Zealand	0.64	1.6	United States	0.04	0.2	United Kingdom	0.20	4.8	Greece	0.21	0.4
South Korea	0.89	4.9	Canada	0.21	0.9	Austria	0.62	7.9	Portugal	0.39	0.6
United States	0.38	10.1	Portugal	1.25	3.8	Belgium	1.25	8.2	Italy	0.19	0.8
Japan	0.91	12.4	Spain	0.89	9.8	Switzerland	1.21	16.3	United States	0.22	11.1
Australia	0.74	14.2	France	1.00	53.2	Netherlands	1.65	22.3	Spain	1.72	57.8

Bold text: Contributions above average.

Table 3. Coordinates and Contribution of Regions of Origin to the Axes 1 to 4.

Axis 1		Axis 2		Axis 3		Axis 4					
	Coord. Ctr.		Coord. Ctr.		Coord. Ctr.		Coord. Ctr.				
Central & Eastern Europe	-1.09	32.7	Central & Eastern Europe	-0.55	17.6	Central & Eastern Europe	-0.55	23.1	Africa	-0.46	19.5
Mediterranean	-0.70	9.4	East Asia	-0.14	2.9	Africa	-0.22	3.7	Western Europe	-0.19	3.1
Western Europe	-0.59	9.1	Nordic Countries	-0.52	2.5	East Asia	-0.12	3.0	South East Asia	-0.16	1.4
Africa	-0.41	4.6	Western Europe	-0.17	1.6	Central Asia	-0.38	1.2	East Asia	-0.07	1.3
Nordic Countries	-0.42	0.8	Central Asia	-0.30	0.6	South East Asia	-0.05	0.1	Nordic Countries	-0.15	0.3
Central Asia	-0.20	0.1	South East Asia	-0.12	0.5				Western Asian Arab States	-0.06	0.1
Latin America & Caribbean	-0.08	0.1	South Asia	-0.08	0.4	Mediterranean	0.00	0.0	Central Asia	-0.06	0.0
Western Asian Arab States	0.02	0.0	Oceania	-0.21	0.2	Western Asian Arab States	0.01	0.0	Oceania	-0.04	0.0
North America	0.19	0.3	Mediterranean	-0.06	0.2	Nordic Countries	0.04	0.0			
Oceania	0.62	0.8	North America	0.00	0.0	Oceania	0.15	0.1	North America	0.01	0.0
South East Asia	0.55	5.0	Western Asian Arab States	0.09	0.2	Latin America & Caribbean	0.08	0.3	Central & Eastern Europe	0.07	0.4
South Asia	0.43	5.2	Latin America & Caribbean	0.65	14.4	North America	0.12	0.4	Mediterranean	0.13	1.1
East Asia	0.65	32.0	Africa	1.02	58.9	South Asia	0.13	1.4	South Asia	0.15	2.2
						Western Europe	0.95	66.6	Latin America & Caribbean	1.14	70.5

Bold text: Contributions above average.