



Foreign Brains in the Top European Universities: Import of non-European PhDs into Europe

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ABSTRACT

Europe has a strong ambition to gather the world's brightest brains into the region. In order to measure the state of the dominance of the foreign brains in Europe, the study examines the proportion of foreign Doctor of Philosophy (PhD) in the top European top universities in Economics. The results of the examination on the one hand show that the top European universities are most dominated by the 'self-supplied' PhDs, namely the PhDs granted and held by the same universities and the same countries. On the other hand, the results demonstrate that the top European universities are dominated by the top American PhDs, by excluding the 'self-supplied' PhDs. Based on the results, this study concludes that Europe nearly fails to achieve the ambition and should more actively try to hold the world's best PhDs as the 'self-supplied' PhDs are dominant in the region.

Keywords: Import of non-European PhDs into Europe, self-supplied PhDs, top European Universities in Economics, internationalization of education.

INTRODUCTION

Europe wants to be 'the most-favoured destination of students, scholars and researchers from other world regions' (EC, 2002:5). European countries seek to gather the world's brightest brains into the region. The most significant benefit by employing internationally renowned academic staff is obviously to increase the level of research and education. The world's leading education and research in a university undoubtedly attracts more students, domestic or foreign, to study there and more private investments into the university.

Besides that, gathering academic staff around the world can contribute to the internationalization of universities. The internationalization of universities allows them to incorporate global, intercultural or international dimension into the functions, objective, or delivery of university education (Knight, 2003).

Further, Simmons (2014, March 11) argues that the internationalization of universities have four distinctive types of benefits. First, the understanding of global issues and their local impacts can be deepened through the internationalization of universities. Second, skills that let students move in heterogeneous environments with a wide range of people can be obtained. Third, the internationalization of universities enables students to respect differences/different values and recognize different culture as legitimate. Finally, thanks to the internationalization, students can advance and handle intercultural communication skills. Thus, it is unquestionable that internationalized universities are very attractive for both students and academics around the world (Top Universities, 2011 August 5).

Consequently, a number of universities, especially those in the developed countries, have strong ambition to 'import' holders of doctoral degrees or doctor of Philosophy (PhD) from the world's prestigious universities. As Sagara (2014) demonstrates, in terms of economics, the top universities in Northeast Asia are dominated by the holders of PhDs from the world's top universities outside Asia. However, there is a huge difference in the dominance of the world's top universities between Hong Kong, Singapore and South Korea and China and Japan, as the

proportion of the PhD holders from the world's best universities outside Asia to all the faculties is much higher in the former group than the latter.

How about Europe? Compared with Northeast Asia, Europe has more universities that get ranked in the world's top university rankings. According to the QS University Rankings by Subject 2014: Economics & Econometrics, while 18 universities in Northeast Asia get ranked in the top 100 of the rankings, 37 universities in Europe secure places in the top 100. Thus, it is possible that European universities are less dominated by the brains from outside Europe. However, because Europe is geographically closer to the US, which has the largest number of universities that are in the top 100, it is also possible that the domination of foreign brains on European universities is stronger. Then, this study seeks to investigate how much the top universities in Europe are dominated by the world's top universities outside Europe in order to understand the state of foreign brains in the top European universities, focusing on economics.

METHODOLOGIES

As discussed above, this study looks at the dominance of foreign brains on the top European universities. In addition, its subject focus is on economics. Economics seems a good subject for this research because it is globally very popular and most universities offer undergraduate and postgraduate courses in economics. Then, the top European universities in the subject of economics is chosen based on the QS University Rankings by Subject 2014: Economics & Econometrics. Though a wide range of world university rankings exist and the reliability of the University Rankings is controversial (Baty, 2012; Holmes, 2013), the Rankings can be effectively used for this study because every ranking has flaws, and the QS University Rankings have been very actively improving themselves so that they are more trustworthy (Baty, 2012).

According to the QS University Rankings by Subject 2014: Economics & Econometrics, there are 14 European universities in the world's top 50 and 23 in the top 100. The list of the world's top 100 universities is shown in the Table 1, in which European universities are blackened. Then, researchers with doctoral degrees or Doctor of Philosophy (PhD) in economics in the top European universities were investigated through their websites in August 2014 in order to evaluate the dominance of non-European world's top.

Table 1. List of the top universities in Economics

QS	Institute	Country	QS	Institute	Country
1	Harvard	US	51-100	Wirtschaftsuniversität Wien (WU)	AT
2	Massachusetts Institute of Technology (MIT)	US	51-100	Adelaide	AU
3	London School of Economics (LSE)	UK	51-100	Vrije Universiteit Brussel (VUB)	BG
4	Stanford	US	51-100	Université catholique de Louvain (UCLu)	BG
5	California, Berkeley (UCB)	US	51-100	Katholieke Universiteit Leuven (KUL)	BG
5	Chicago	US	51-100	Fundação Getulio Vargas (FGV)	BR
7	Princeton	US	51-100	Universidade de São Paulo	BR
8	Yale	US	51-100	McGill	CA
9	Pennsylvania	US	51-100	Zurich	CH
10	Cambridge	UK	51-100	Pontificia Universidad Católica de Chile	CL
11	Columbia	UK	51-100	Fudan	CN
12	Oxford	UK	51-100	Shanghai Jiao Tong	CN
13	New York (NYU)	US	51-100	Bonn	DE
14	California, Los Angels (UCLA)	US	51-100	Mannheim	DE
15	Northwestern	US	51-100	Munich	DE
16	National University of Singapore (NUS)	SG	51-100	Aarhus	DK
17	University College London (UCL)	UK	51-100	Copenhagen	DK
18	Australia National University (ANU)	AU	51-100	Universitat Autònoma de Barcelona (UAB)	ES
19	Tokyo	JP	51-100	Toulouse School of Economics (TSE)	FR
20	Bocconi	IT	51-100	Hong Kong Polytechnic	HK
21	Warwick	UK	51-100	Trinity College Dublin (TCD)	IE
22	Cornell	US	51-100	Bologna	IT
23	Melbourne	AU	51-100	Hitotsubashi	JP
24	Monash	AU	51-100	Osaka	JP
25	Duke	US	51-100	Waseda	JP
26	Michigan	US	51-100	Sungkyuukwan	KR
26	Toronto	CA	51-100	Yonsei	KR
28	Hong Kong	HK	51-100	Amsterdam	NL
29	California, San Diego (UCSD)	US	51-100	Maastricht	NL
30	Hong Kong University of Science and Technology	HK	51-100	VU University Amsterdam (VU)	NL
31	London Business School (LBS)	UK	51-100	Auckland	NZ
32	Stockholm School of Economics (SSE)	SE	51-100	Lund	SE
33	Peking	CN	51-100	Nanyang Technological University (NTU)	SG
34	Chinese University of Hong Kong	HK	51-100	National Taiwan University	TW
35	Seoul National University	KR	51-100	York	UK
36	British Columbia (UBC)	CA	51-100	Nottingham	UK
37	Tsinghua	CN	51-100	Manchester	UK
38	Erasmus University Rotterdam (EUR)	NL	51-100	Edinburgh	UK
39	Brown	US	51-100	Birmingham	UK
40	Universitat Pompeu Febrà (UPF)	ES	51-100	California Institute of Technology (Caltech)	US
41	Eidgenössische Technische Hochschule (ETH)	CH	51-100	Carnegie Mellon University (CMU)	US
42	Kyoto	JP	51-100	Dartmouth	US
42	Queensland	AU	51-100	Pennsylvania state	US
44	Pantheon-Sorbonne University (Paris I)	FR	51-100	California, Davis (UCD)	US
45	New South Wales	AU	51-100	Illinois at Urbana-Champaign	US
46	Universidad Carlos III de Madrid (UCIII)	ES	51-100	Maryland, College Park	US
47	Boston	US	51-100	Minnesota	US
48	Sydney	AU	51-100	Southern California	US
49	Korea	KR	51-100	Texas, Austin	US
50	Tilburg	NL	51-100	Wisconsin, Madison	US

PhDs, ranked in the top 100, on the top European universities.

RESULTS

The dominance of foreign PhDs

The investigation, as demonstrated in the Table 2, found that there are 1066 PhD holders in the top European universities and the number of the PhD-granting universities is 70. European universities account for 758 (71.11%), followed by American universities (298, 27.95%), and then Singapore (4, 0.38%), Canada (4, 0.38%) and Australia (2, 0.19%). Thus, almost 99% of the PhD holders in the top European universities hold PhDs from American or European universities. Although the results seem to indicate that the top European universities are dominated by the European PhDs, it should not be forgotten that Europe is not a 'country'. By looking at the results by European countries, not Europe, we can understand the dominance of the American PhDs on the top European universities.

By so doing, it can be made clear how dominant the American PhDs are in the top European universities. Obviously, in terms of countries, the American PhDs are most dominant in the top European universities. British PhDs are the second most dominant PhDs in Europe. As British universities account for 211 of 1066 PhDs (19.79%), the difference between the US and the UK may not be so big. The Netherlands comes third by 169 PhDs (15.85%), which is nearly as half as American PhDs in the top European universities.

Then, the European followers after the UK and the Netherlands are completely defeated by the US. Belgium, Denmark and France respectively represent nearly 7% of the total PhDs: 7.41% (79 PhDs) for Belgium, 7.32% (78 PhDs) for Denmark and 7.13% (76 PhDs) for France. Though Germany, Spain and Sweden individually hold a nearly 3 percent share, Switzerland achieves a 1% share and the share of Italy, Ireland and Austria is respectively less than 1%: 3.66% (39 PhDs) for Germany, 3.19% (34 PhDs) for Spain, 3.00% (32 PhDs) for Sweden, 1.78% (19 PhDs) for Switzerland, 0.84% (9 PhDs) for Italy, 0.56% (6 PhDs) for Ireland and 0.56% (6 PhDs) for Austria.

Next, let me look at the dominance of the non-European PhDs on the top European universities by 'university'. The Table 3 shows which university dominates the top European universities. Regarding the top 10 universities, LSE comes top with 63 PhDs followed by Aarhus (57 PhDs), Oxford (53 PhDs), EUR (48 PhDs) and Tilburg (45 PhDs). The rest of the top 10 include TSE (41 PhDs), Paris I (35 PhDs), UCLu (34 PhDs), MIT (33 PhDs), VUB (30 PhDs) and Amsterdam (30 PhDs).

Table 2. The number and proportion of PhDs by country (excl. PhDs by the same universities and countries)

US	298	27.95%
SG	4	0.38%
CA	4	0.38%
AU	2	0.19%
Europe	758	71.11%
UK	211	19.79%
NL	169	15.85%
BG	79	7.41%
DK	78	7.32%
FR	76	7.13%
DE	39	3.66%
ES	34	3.19%
SE	32	3.00%
CH	19	1.78%
IT	9	0.84%
IE	6	0.56%
AT	6	0.56%
Total	1066	100%

Table 3. The number of PhDs by University

Rank	Institute	Country	QS	No
1	LSE	UK	3	63
2	Aarhus	DK	51-100	57
3	Oxford	UK	12	53
4	EUR	NL	38	48
5	Tilburg	NL	50	45
6	TSE	FR	51-100	41
7	Parisl	FR	44	36
8	UCLu	BG	51-100	34
9	MIT	US	2	33
10	VUB	BG	51-100	30
10	Amsterdam	NL	51-100	30
12	Harvard	US	1	26
13	VU Amsterdam	NL	51-100	25
14	Lund	SE	51-100	24
15	Cambridge	UK	10	23
16	UCB	US	5	22
17	Northwestern	US	51-100	21
17	UAB	ES	51-100	21
17	Maastricht	NL	51-100	21
17	Copenhagen	DK	15	21
21	Pennsylvania	US	9	20
22	Warwick	UK	21	18
23	Stanford	US	4	17
24	Chicago	US	51-100	16
24	Bonn	DE	6	16
26	KUL	BG	51-100	15
27	Yale	US	51-100	14
27	NYU	US	13	14
27	Nottingham	UK	8	14
30	Princeton	US	51-100	13
30	UCLA	US	51-100	13
30	Mannheim	DE	14	13
30	York	UK	7	13
34	Zurich	CH	51-100	12
35	Minnesota	US	51-100	11
35	UCL	UK	17	11
37	UCSD	US	51-100	10
37	Munich	DE	51-100	10
37	Mancherter	UK	29	10
40	Columbia	US	47	9
40	Cornell	US	22	9
40	Boston	US	11	9
43	SSE	SE	40	8
43	UPF	ES	32	8
45	ETH	CH	41	7
46	UCD	US	51-100	6
46	TCD	IE	51-100	6
46	WU	AT	51-100	6
49	Wisconsin	US	51-100	5
49	Caltech	US	51-100	5
49	Cocconi	IT	46	5
49	UC III	ES	20	5
53	Duke	US	51-100	4
53	Maryland	US	51-100	4
53	Michigan	US	26	4
53	Bologna	IT	25	4
57	Brown	US	51-100	3
57	Texas	US	51-100	3
57	Toronto	CA	39	3
57	NUS	SG	26	3
57	Edinburgh	UK	16	3
62	CMU	US	51-100	2
62	Southern Cali	US	51-100	2
62	ANU	AU	51-100	2
62	Pennsylvania state	US	31	2
62	LBS	UK	18	2
67	Illinois	US	51-100	1
67	Nanyang	SG	51-100	1
67	UBC	CA	51-100	1
67	Birmingham	UK	36	1

The dominance of foreign PhDs after excluding PhDs granted and held by the same universities

The results presented above looked at all the PhDs held by the top European universities. However, the PhDs examined above include the PhDs granted and held by the same institutions. If the PhDs granted and held by the same institutions are excluded, as demonstrated in the Table 4, we have a different picture, and the total number of PhDs in this case is 701. Looking at the new results by country, European PhDs again dominate the top European universities (393 PhDs, 56.06%), followed by the US (298 PhDs, 42.51%), Singapore (4 PhDs, 0.57%), Canada (4 PhDs, 0.57%) and Australia (2 PhDs, 0.29%). Where the European PhDs are categorised by country, the UK holds a 22.40 % share (157 PhDs) while the Netherland's share is 10.13% (71 PhDs). A nearly 4% share is taken by Denmark (35 PhDs, 4.99%), France (32 PhDs, 4.56%), Spain (31 PhDs, 4.42%) and Belgium (31 PhDs, 4.42%).

In terms of university, as shown in the Table 5, two British universities, LSE and Oxford, dominate the top two as LSE tops again the ranking with 58 PhDs and Oxford is placed in the second place with 36 PhDs. Tilburg and MIT are ranked in the third and fourth place with 35 PhDs and 33 PhDs respectively followed by Harvard (26 PhDs), UCB (22 PhDs), Paris I (22 PhDs), Northwestern (21 PhDs) and Pennsylvania (20 PhDs).

The dominance of foreign PhDs after excluding PhDs granted and held by the same universities and countries

Finally, the results can be further more different by excluding the PhDs granted and held by the same universities and countries (Table 6). According to the results, American PhDs dominate a 59.01% share (298 PhDs) while European PhDs hold a 39.01% share (197 PhDs), followed by Singapore (4 PhDs, 0.79%), Canada (4 PhDs, 0.79%) and Australia (2 PhDs, 0.40%). Looking at the European PhDs by country, the British PhDs hold a 13.47% share (68 PhDs), and Belgium and the Netherlands come after the UK with 27 PhDs (5.35%) and 24 PhDs (4.75%). Germany, France and Spain follow them with 20 PhDs (3.96%), 17 PhDs (3.37%) and 13 PhDs (2.57%). The rest of the European countries account for less than a 2% share including Switzerland (10 PhDs, 1.98%), Sweden (8 PhDs, 1.98%), Denmark (6 PhDs, 1.19%), Italy (0.59%) and Ireland (1 PhD, 0.20%).

Looking at the results by university, the American university, MIT, finally comes top in the ranking with 33 PhDs, followed by LSE with 32 PhDs. The following six places are then dominated by the American universities: Harvard (26 PhDs), UCB (22 PhDs), Northwestern (21 PhDs), Pennsylvania (20 PhDs), Stanford (17 PhDs), Chicago (16 PhDs) and Stanford (17 PhDs). The ninth place is held by Oxford (16 PhDs), again followed by two American universities, NYU (14 PhDs) and Yale (14 PhDs).

Table 4. The number and proportion of PhDs by country (excl. PhDs by the same universities and countries)

US	298	42.51%
SG	4	0.57%
CA	4	0.57%
AU	2	0.29%
Europe	393	56.06%
UK	157	22.40%
NL	71	10.13%
DE	35	4.99%
FR	32	4.56%
ES	31	4.42%
BG	31	4.42%
CH	13	1.85%
SE	9	1.28%
DK	9	1.28%
IT	4	0.57%
IE	1	0.14%
AT	0	0.00%
Total	701	100%

Table 5. The number of PhDs by University

Rank	Institute	Country	QS	No
1	LSE	UK	3	58
2	Oxford	UK	12	36
3	Tilburg	NL	50	35
4	MIT	US	2	33
5	Harvard	US	1	26
6	UCB	US	5	22
6	Parist	FR	44	22
8	Northwestern	US	15	21
9	Pensylvania	US	9	20
9	UAB	ES	51-100	20
11	Stanford	US	4	17
11	Cambridge	UK	10	17
13	Chicago	US	6	16
13	Bon	DE	51-100	16
15	NYU	US	13	14
15	Yale	US	8	14
15	Warwick	UK	21	14
18	UCLA	US	14	13
18	Princeton	US	7	13
20	Mannheim	DE	51-100	12
20	VUB	BG	51-100	12
22	Minnesota	US	51-100	11
22	UCLu	BG	51-100	11
24	UCSD	US	29	10
24	UCL	UK	17	10
24	EUR	NL	38	10
24	Maastricht	NL	51-100	10
24	TSE	FR	51-100	10
24	Zurich	CH	51-100	10
30	Boston	US	47	9
30	Cornell	US	22	9
30	Columbia	US	11	9
33	Nottingham	UK	51-100	8
33	Amsterdam	NL	51-100	8
33	VU Amsterdam	NL	51-100	8
33	KUL	BG	51-100	8
37	York	UK	51-100	7
37	SSE	SE	32	7
37	UPF	ES	40	7
37	Munich	DE	51-100	7
41	UCD	US	51-100	6
42	Wisconsin	US	51-100	5
42	Caltech	US	51-100	5
42	Manchester	UK	51-100	5
42	Aarhue	DK	51-100	5
46	Maryland	US	51-100	4
46	Michigan	US	26	4
46	Duke	US	25	4
46	Bocconi	IT	20	4
46	UC III	ES	46	4
46	Copenhagen	DK	51-100	4
52	Texas	US	51-100	3
52	Brown	US	39	3
52	NUS	SG	16	3
52	ETH	CH	41	3
52	Toronto	CA	26	3
57	CMU	US	51-100	2
57	Southern Cali	US	51-100	2
57	Pennsylvania state	US	51-100	2
57	Lund	SE	51-100	2
57	ANU	AU	18	2
62	Illinoie	US	51-100	1
62	Edinburgh	UK	51-100	1
62	LBS	UK	31	1
62	Nanyang	SG	51-100	1
62	TCD	IE	51-100	1
62	UBC	CA	36	1
68	Birmingham	UK	51-100	0
68	Bologna	IT	51-100	0
68	WU	AT	51-100	0

Table 6. The number and proportion of PhDs by country (excl. PhDs by the same universities and countries)

US	298	59.01%
SG	4	0.79%
CA	4	0.79%
AU	2	0.40%
Europe	197	39.01%
UK	68	13.47%
BG	27	5.35%
NL	24	4.75%
DE	20	3.96%
FR	17	3.37%
ES	13	2.57%
CH	10	1.98%
SE	8	1.58%
DK	6	1.19%
IT	3	0.59%
IE	1	0.20%
AT	0	0.00%
Total	505	100%

Table 7. The number of PhDs by University

Rank	Institute	Country	QS	No
1	MIT	US	2	33
2	LSE	UK	3	32
3	Harvard	US	1	26
4	UCB	US	5	22
5	Northwestern	US	15	21
6	Pensylvania	US	9	20
7	Stanford	US	4	17
8	Chicago	US	6	16
8	Oxford	UK	12	16
10	NYU	US	13	14
10	Yale	US	8	14
12	UCLA	US	14	13
12	Princeton	US	7	13
14	Minnesota	US	51-100	11
14	Tilburg	NL	50	11
14	VUB	BG	51-100	11
17	UCSD	US	29	10
17	Bonn	DE	51-100	10
17	UCLu	BG	51-100	10
20	Boston	US	47	9
20	Cornell	US	22	9
20	Columbia	US	11	9
20	TSE	FR	51-100	9
24	Pariel	FR	44	8
24	Zurich	CH	51-100	8
26	UCD	US	51-100	6
26	Cambridge	UK	10	6
26	SSE	SE	32	6
26	UAB	ES	51-100	6
26	UPF	ES	40	6
26	KUL	BG	51-100	6
32	Wisconsin	US	51-100	5
32	Caltech	US	51-100	5
32	UCL	UK	17	5
32	Amsterdam	NL	51-100	5
32	Mannheim	DE	51-100	5
32	Munich	DE	51-100	5
38	Maryland	US	51-100	4
38	Michigan	US	26	4
38	Duke	US	25	4
38	Warwick	UK	21	4
38	EUR	NL	38	4
43	Texas	US	51-100	3
43	Brown	US	39	3
43	York	UK	51-100	3
43	NUS	SG	16	3
43	Maastricht	NL	51-100	3
43	Bocconi	IT	20	3
43	Aarhue	DK	51-100	3
43	Copenhagen	DK	51-100	3
43	Toronto	CA	26	3
52	CMU	US	51-100	2
52	Southern Cali	US	51-100	2
52	Pennaylvvania state	US	51-100	2
52	Lund	SE	51-100	2
52	ETH	CH	41	2
52	ANU	AU	18	2
58	Illinois	US	51-100	1
58	Nottingham	UK	51-100	1
58	Manchester	UK	51-100	1
58	Nanyang	SG	51-100	1
58	VU Amsterdam	NL	51-100	1
58	TCD	IE	51-100	1
58	UC III	ES	46	1
58	UBC	CA	36	1
66	Edinburgh	UK	51-100	0
66	LBS	UK	31	0
66	Birmingham	UK	51-100	0
66	Bologna	IT	51-100	0
66	WU	AT	51-100	0

DISCUSSION

In the previous section, three kinds of results regarding the dominance of foreign brains on the top European universities are demonstrated. Then, we have now some remarkable findings.

The dominance of self-supplied PhDs

First, the top European universities are dominated by the European PhDs because 71.1% of all the PhDs are European, while 27.95% are American. The dominance of European PhDs on the top European universities is due to the 'self-supply' of PhDs within universities or countries. The proportions of the European and American PhDs change to 56.06% (decrease by 15.04%) and 42.51% (increase by 14.56%) by excluding the PhDs granted and held by the same universities: and to 39.01% (decrease by 17.05%) and 59.01% (increase by 16.5%) by further excluding the PhDs granted and held by the same countries. Thus, the top European universities as a whole tend to employ PhDs granted by the same universities and the same countries. However, rather than the 'self-supplied' PhDs, it is likely that they prefer American PhDs to the PhDs granted by other countries including those in Europe.

The relationship between non-European PhDs and world's rankings

Next, though it is closely related to the previous point, it is shown that the top European universities tend to employ PhDs from the higher-ranked universities as they need to employ them from universities more external to them. Before the PhDs granted and held by the same universities are excluded, 9 European universities, including LSE, Aarhus, Oxford, EUR, Tilburg, TSE, Paris I, UCLu and VBU, along with one American university, MIT, are in the top 10. Concerning the nine European universities, three of them are British and Dutch, two of them are French and Belgian, and one of them is Danish. Thus, six countries are represented in the top 10. However, among them, only LSE (3rd) and MIT (2nd) are the top 10 universities; Oxford is in the top 11-20, EUR is in the top 31-40, Paris I and Tilburg are in the top 41-50 and Aarhus, TSE, UCLu and VUB are in the top 51-100. Thus, although many European countries are represented in this ranking, its top 10 universities are not higher-ranked in the QS University Rankings.

By excluding the PhDs granted and held by the same universities, though the number of European countries represented in the top 10 decreases, the top 10 universities in this ranking are relatively higher-ranked in the QS University Rankings. Regarding the top 10 universities, five of them (MIT, Harvard, UCB, Northwestern and Pennsylvania) are American, while two are British (LSE and Oxford), and France (Paris I), Spain (UAB) and the Netherlands (Tilburg) respectively have one university in the ranking. Though a half of the top 10 universities are now American, their places in the QS Rankings become relatively higher. LSE, MIT, Harvard, UCB and Pennsylvania are the world's top 10 universities (increase by three), Oxford and Northwestern are in the 11-20 (increase by one), Paris I and Tilburg are in the top 41-50 (the same) and one is in the top 51-100 (decrease by three).

Then, by excluding the PhDs granted and held by the same universities and countries, though nearly all of the top 10 universities become American, their places in the QS Rankings are the highest-ranked among the three results. Regarding countries of the top 10 universities, 8 of them are American (MIT, Harvard, UCB, Northwestern, Pennsylvania, Chicago, NYU and Yale) and 2 are British (LSE and Oxford). Namely, all of them are from the English-spoken countries. Further, 8 of them (LSE, MIT, Harvard, UCB, Pennsylvania, Chicago, NYU and Yale) are the world's top 10 universities and 3 are in the top 11-20 (Northwestern, NYU and Oxford). Among the top 10 universities in the QS University Rankings, only Princeton and Cambridge are not in the top 10 in this result. Because NYU is ranked 13th, Northwestern is 15th and Oxford is 12th,

it can be said that the top 10 universities in this result are almost the same as those in the QS University Rankings.

Therefore, it can be speculated from these results that the top European universities as a whole tend to employ the PhDs granted by the same universities or the same countries, namely the 'self-supplied' PhDs. These results also suggest that they are likely to employ PhDs from the world's best universities when they choose PhDs outside their countries.

CONCLUSION

This paper examined the state of foreign brains in Europe. For that purpose, it investigated how much the top European universities are dominated by the foreign PhDs in terms of economics. Then, it was disclosed that the top European universities are dominated by the PhDs granted by the same universities or by the same countries' universities, namely the 'self-supplied' PhDs, but that American PhDs dominate the top European universities when the 'self-supplied PhDs' are excluded.

There may be a number of reasons that the top European universities prefer the 'self-supplied' PhDs. A university might employ a PhD from the same university because the university perfectly understands her/his ability in research or teaching during his/her PhD studies. It might be also possible that the 'self-supplied' PhDs are employed because of the linguistic reason as a university may want those who command its country's language. Some universities may be more interested in educating domestic students than international students and courses would be then delivered in their local languages rather than English. In this case, the 'self-supplied' PhDs would be better for them. Moreover, employing the 'self-supplied' PhDs may attract foreign students, especially those from the developing countries, because receiving PhDs in a university or a country may enable them to work there.

Employing the 'self-supplied' PhD would, as discussed above, has some merits for a university or a country. However, there are a number of demerits for the dominance of the 'self-supplied PhDs' in a university or a country. One of them is that it would obviously hamper the internationalization of universities. As argued above, a number of universities in the world try to be internationalized because of the distinctive advantages that the internationalization of universities would bring about. If a university is filled with the 'self-supplied' PhDs, it would be difficult for the university to be fully internationalized. Another significant disadvantage for universities is that the dominance of the 'self-supplied' PhDs would lead to the low proportion of the PhDs from the world's best universities. Surely, researches who hold PhDs from the world's best universities would not always be the world's best researchers. However, it is more likely that their performances in both research and education would be superior to those from the lower-ranked universities because they have the world's best education under the world's best researchers. It can be understandable that some American universities such as Harvard and MIT are dominated by the 'self-supplied' PhDs because those who hold the PhDs from the American giants are educated by the world's best researchers. Although the dominance of the American PhDs in American universities could be disadvantageous for the internationalization of them, they can claim that they choose the 'self-supplied' PhDs to be the world's best university in education and research at the expense of the internationalization.

Considering the QS Rankings, at least in terms of economics, a few universities in Europe such as LSE and Cambridge can make such a fearless claim, because they are ranked the 3rd and 10th in the Rankings. However, these European universities are not dominated by the 'self-supplied' PhDs and they, especially LSE, the top school in Europe, seek to employ the PhDs from the world's best universities, possibly in order to improve the internationalization of them and to provide the world's best education and research.

There are clearly a wide range of advantages for holding the 'self-supplied' PhDs to a certain degree and they should not be underestimated. However, as Europe itself admits the importance of gathering the world's best brains into the region (EC, 2002), Europe and the top European countries should more actively seek to hold the PhDs from the world's best universities. If Europe fails to gather the brains, they would be taken by other regions such as Asia, which would be apparently disadvantageous for Europe.

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