Chapter 12
Academic Profession in Taiwan: Whose Doctorate Graduates Hold a Stronger Network Among Academics?

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Abstract To fill the literature gap on academic profession in Taiwan, the study aims to reveal whose doctorate graduates hold a stronger network among academics in Taiwan. The sample includes 29,469 individuals from 157 higher education institutions. The main findings include: (1) The dominant faculty hiring practice pattern is that the majority of the Taiwanese HEIs (111 institutions; 71%) have more home-trained than overseas-trained faculty. (2) The limited range of host countries shows clear. Taiwan-trained faculty hold the strongest network, and US-trained faculty hold the second. Faculty trained from the UK, Canada, Australia, and Japan, represent an extremely minor proportion. (3) Among the top ten host institutions, there are nine institutions from Taiwan but only one from the US. The only US institution in the top ten is the University of California. (4) The first institution in other host countries is, respectively, the University of London UK, the University of Queensland Australia, the University of Toronto Canada, the University of Tokyo Japan, Ludwig-Maximilians-Universität München Germany, and the Université Paris I Panthéon-Sorbonne France. The implications for those overseas host countries and institutions, and for the younger generation to make a decision about where to pursue their doctoral education at home or overseas were discussed and proposed.

Keywords Academic profession · Home-trained faculty · Overseas-trained faculty · Taiwan

12.1 Introduction

Academics flow toward the best higher education institutions in the best countries, from the developing countries to developed ones, and from the periphery to the center of academia. This trend raises concerns about the risks of brain drain and its negative implications not only for the competitiveness of nations (e.g. Leporia, Seeberb, & Bonaccorsic, 2015) but also of higher education institutions (HEIs).

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Within this context, faculty hiring process and patterns as well as the influencing factors of hiring choices are some of the main subjects in the study of changing academic profession (e.g. Altbach, Reisberg, & Pacheco, 2012).

Among the factors, doctorate training background and the network associated with their graduating university are recognized as critical structure factors not only in faculty hiring, promotion, and grant seeking (Horta, Sato, & Yonezawa, 2011), but also in explaining faculty perceptions, behaviors, performance toward their scholarship (Shin, Jung, & Lee, 2016). Doctorate training represents the faculty's academic socialization process in which they learn language, knowledge, skills, and norms to be a member of the academic community (Holley, 2015). Along the same lines, the academic network obtained from the doctorate training experience overseas is assumed to be different from that at home, with an influence in faculty hiring practices (e.g. Shin et al., 2016). The preference to hire faculty with a doctorate degree from prestigious overseas universities has long been observed in East Asia (Shin et al., 2016). Thus, it is interesting to know the size and pattern of the academic network that might lead to understanding the presence of homogeneity or diversity as well as of academic inbreeding.

Following the common pattern, faculty hiring practices in Taiwan have been formally outlined in national legislation and institutional regulation. For example, a doctorate degree has been a requirement for almost all academic appointments, faculty vacancies are publicly advertised in the national press and open to all candidates, and HEIs maintain considerable autonomy in determining hiring choices. Despite a trend toward making the hiring practices more institutionalized and transparent, it is assumed that individuals are still often hired through personal networks and filled by internal candidates (Altbach et al., 2012). However, this seems to be uncommon in Taiwan. Regarding academic inbreeding in terms of university hiring its own doctorate graduates, Chiang (2017, 2020) reports a considerably low rate of academic inbreeding found nationally. Among 28,839 full-time faculty with a doctorate, the rate of academic inbreeding is only 4%. It slightly increases to 6% if excluding those faculty who were hired in HEIs without doctorate programs. These figures not only indicate a weak academic network in faculty hiring practices in Taiwan, but also partly explain why pursuing doctoral education at home has lost its attractiveness for younger generations.

Under the government policy to build the capacity of HEIs to advance their status in the knowledge community, the doctoral education system in Taiwan has demonstrated significant development in terms of both size and quality for the last two decades. Due to the insufficient well-established local doctoral education programs, the government has also offered national scholarship programs to encourage students to pursue doctorate training overseas (mainly in the US and European countries). The increasing proportion of faculty with doctorates is explicitly revealed in the qualification profiles of the faculty.

While the growth of doctoral programs produces a large number of doctorate graduates, available faculty positions in the academic job market are limited. As illustrated in Fig. 12.1, the cumulative total of doctorate graduates in 2018 was 65,048, which is 5.2 times greater than that of 1991. During the same period, the

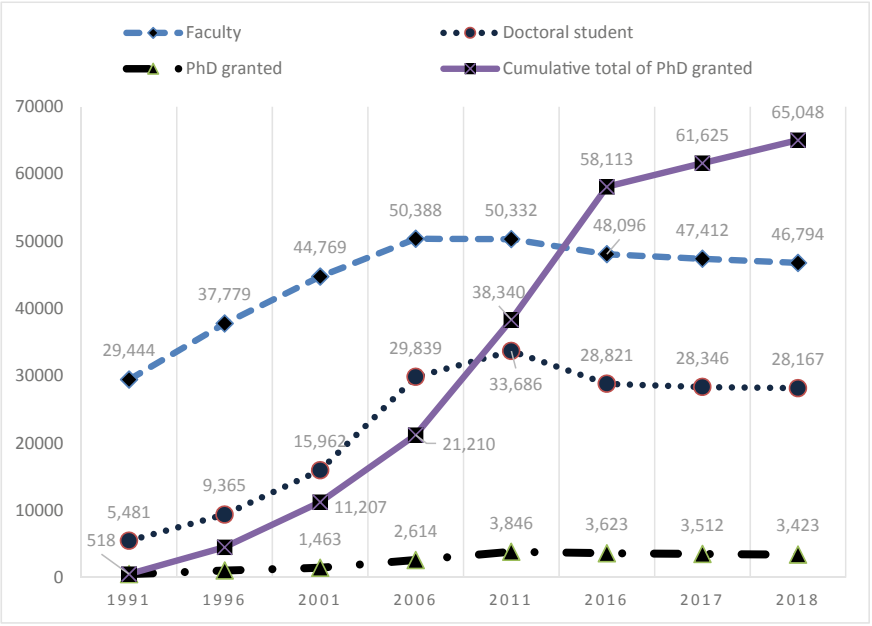

Fig. 12.1 The change in number of faculty, doctoral students, and graduates from 1991 to 2018 in Taiwan (*Source* Education Statistic [1990–2019], Ministry of Education, Taiwan)

number of faculty only grew 0.59 times as faculty positions increased by 17,350 places. This also means that only 27 out of 100 doctorate graduates might have opportunity to enter into academic job market without taking the overseas returnees into account. A mismatch between the supply and demand for doctoral graduates creates a tension. The nation's capacity and strategy to refresh, build, and regenerate an aging workforce needs urgent consideration, especially during a period of low attendance for doctoral programs both local and abroad. Before any action is planned, the diversity or homogeneity in terms of the doctoral qualification profiles among academics in Taiwan should be examined.

As scholars (e.g. Lu & McInerney, 2016) observe, network structures shape labor market outcomes. Beyond academic inbreeding, other academic networks based on faculty's origin of doctorate education in Taiwan have never researched. Thus, the study aims to understand whose doctorate graduates holds a stronger network among academics in Taiwan in terms of size of the faculty related to the source of their doctorate qualifications. This study refers the sources of doctorate training background to the faculty's doctoral training countries and institutions, either at home or overseas.

This paper is organized into four sections. Section 12.2 reviews academic networks in faculty hiring, and faculty's doctorate training patterns to identify the literature gap. Section 12.3 describes the method about the data source and analysis. Section 12.4

presents the main findings from the data. Finally, the study discusses the challenges facing current doctoral education and faculty hiring practice in Taiwan and concludes with policy recommendations.

12.2 Literature Review

12.2.1 Academic Networks in Faculty Hiring

Push-pull factors, brain drain, academic dependency between the center and the periphery, and the positional competition theory are commonly used to explain the flow and mobility of doctorate graduates as faculty members. The center–periphery concept implies that central institutions function as international knowledge production systems, while peripheral higher institution systems simply copy developments and act as knowledge-users through the network by which returnees who had trained in the center play an important role (e.g. Altbach, 1981). If returnees from studying abroad do not exhibit greater academic productivity, then the positional competition perspective is powerfully supported to explain that foreign degrees are highly regarded as a status symbol. This is explicitly revealed in East Asian higher education systems where hired a high proportion of foreign degree holders as faculty (Shin, Jung, Postiglione, & Azman, 2014). With the globalization of knowledge, the boundary between the center and the periphery becomes obscure over time. Brain drain and brain gain thus evolve into brain circulation.

Lu and McInerney (2016) argue that network structures shape labor market outcomes. For understanding whose doctorate graduate network is stronger among academics, this study utilizes the concepts of network power by Castells (2009) to analyze the academic network that might have power and empower decision-making in faculty hiring practices. While Castells (2009) questions where power lies in the global network society, he identifies four distinct forms of power in the networks (pp. 42–47). These are (1) networking power; (2) network power; (3) networked power; and (4) network-making power. Networking power refers to the exercise of inclusion and exclusion by the actors and organizations included in the networks over those who are not included. Network power, the imposition of the rules of inclusion over its members, forms and strengthens the networked power. Network-making power refers to the emotion that plays a role to influence decision-making as "people tend to select information in ways that favor the decision they are inclined to make" (Castells, 2009, p. 145).

Those who hold a stronger position in the network hold more power than those without. In a comparative study on paying the professoriate, Altbach et al. (2012) found that even when faculty vacancies are publicly announced and where formal procedures exist for hiring new staff, positions are often filled internally and faculty are hired through personal networks. This is true in many countries, such as Colombia,

Armenia, Russia, and Japan (Altbach et al., 2012). In Korea, overseas doctorate graduates, mainly from the US, become the dominant group of knowledge transmitters in the Korean academic community "due to their strong global culture capital, international network and language proficiency in English, which domestic doctorates do not often possess" (Jung, 2018, p. 209). As Shin et al. (2016) observe, the homogeneity of Korean academics reinforces "*hakmak*", academic networks based on their origin of undergraduate education in the top three research universities, Seoul National University, Yonsei University, and Korea University. Even though the government makes efforts to ensure the hiring process is transparent, the culture of faulty hiring that favors those in the network has not changed much (Shin et al., 2016). In China, Lu and McInerney (2016) examine which network structure better predicts positive academic job market outcomes between either doctorate returnees affording structural holes or home-trained doctorate graduates that feature network closure by taking advantage of tight "*guanxi*". Their empirical results reveal that returnees are able to exploit the structural hole position between local actors and those abroad to benefit their first promotion, but network closure benefits home-trained doctorate graduates to gain not only their first promotion but also subsequent promotions. The network closure facilitates trust, familiarity, and identity among members of a group and leads to better labor market outcomes compared to structural holes in the Chinese setting where "*guanxi*" networks persist (Lu & McInerney, 2016).

The question of whether or not doctorate graduates with a center network outperform those trained at home remains interesting to be addressed. In existing studies, both positive and neutral differences in academic performance, have been identified. Shin et al. (2014), for example, examine whether academics with advanced degrees from foreign universities are more research productive than their home-trained counterparts in Korea, Hong Kong, and Malaysia where have relatively large proportions of foreign degree holders among their faculty. Based on the data drawn from the survey of the Changing Academic Profession in 2007–2008, they found that foreign degree holders are not more research productive than their colleagues with domestic degrees. As Jung (2018) argues, though the faculty with overseas training experience might not actually contribute to research productivity and future performance, the overseas doctorates with mobility experience have more opportunities for knowledge exchange and strong international scientific networks.

Further elaboration on "network power" is made by Välimaa, Papatsiba, and Hoffman (2016) to identify it as a "soft power" with the capacity "to influence people, enmeshed in protocols and standards in order to avoid exclusion" and "have the power to accept or reject new members" into the network (p. 33). McLaughlin (2005), for example, contrasted the development of the networks of radical sociology of the 1960s in the US and in Canada. In the US, the networks of radical sociology were held in structures with pressures, incentives, and competitive dynamics to push young scholars to help transform mainstream sociology, but in Canada, they were dispersed into leading smaller interdisciplinary networks to consolidate "control instead of stimulating innovation and intellectual ambition" (McLaughlin, 2005, p. 21). Different academic networks have their own strengths as well as weaknesses. Thus, the issues of academic network if originated from similar doctorate training

background when faculty hire is formed to stimulate innovative and intellectual ideas or to consolidate control, attract attention and concern for the quality and health of the academia.

12.2.2 Faculty's Doctorate Training Patterns

The nature and scope of the overseas training have long been an important factor in faculty staffing in universities, particularly for those countries where doctorate education was in its early development stage. In Australia, for example, a series of studies focused on it. Tien (1960) found that 33% of his 479 respondents were foreign-born by examining staffing at the Universities of Sydney and Melbourne during the 1950s. Encel (1962) concluded that 34% of approximately 1,200 appointments made across Australia during 1957–1960, were from overseas. Interest in the extent of overseas staffing in universities continued into the 1970s when Cropley and Heimingway (1973) suggested an Australia-wide figure or over 30% and Saha and Klovdahl (1979) claimed an overall figure of 40%. Newman (1985) also found a similar staffing pattern in the department of education in Australia universities.

Assumptions regarding high proportion of faculty who receive overseas doctorates are quite often made among East Asian countries. For example, Altbach (1989) argues that a large number of Asian academics are educated abroad, mainly in the US and the UK. Jonkers and Tijssen (2008) also identify that the impact of foreign training in Asia is considerable, forging continuing international links, networks of colleagues, and research and scholarship opportunities. The preference for foreign-trained doctorates in Ease Asian societies and the belief that they have more advanced knowledge and greater research productivity than home-trained ones are found as cultural and social prejudices in academia, though it is unclear whether foreign-trained doctorate graduates are, in fact, more competitive than home-trained ones.

In South Korea, among 140,000 doctorate graduates, 22% received their degrees overseas and 56.8% of them received their degree from the US (Jin et al., 2006; cited in Lee & Kim 2010). A strong preference for hiring faculties and scientists who have earned their doctorates in the US is highlighted by Lee and Kim (2010) who take the Department of Education at Seoul National University as an example, where 19 out of 21 faculty members received their doctoral degrees in the US and this pattern is consistent throughout the Seoul National University. Further study by Jung (2018) reveals that among 48,447 overseas doctorates, according to the 2012 data, 60.4% were from the US, 8.6% from Japan, 6.4% from the UK, and 2.6% from France, accounting for almost 90% of them, and the major research universities are more likely to hire overseas-trained doctorates than home-trained ones. Again, such a pattern has remained stable, though the doctoral education system in Korea has demonstrated significant development for last four decades in terms of both size and quality.

In Hong Kong, there is also a large number of overseas appointees among academics. About 90% of all doctorates held by Hong Kong faculty were granted

overseas, primarily in Australia, Canada, the UK, or the US (Postiglione, 1995). The faculty staffing pattern is changing as there are more doctorates earned in the US than in the UK or elsewhere. One issue Hong Kong higher education confronts is the problem of balancing the localization of administration and of academic leadership, the nationalization of the university mission, and an internationalization of university curriculum (Postiglione, 1995). Heavily recruiting talented academics is recognized as the key success factor of Hong Kong University of Science and Technology (HKUST) where all faculty members have doctorates, and 80% of them received doctorates from or were employed at one of the top 24 universities in the world (Postiglione, 2011).

Following the systemic development and internationalization of higher education, the volume of studies of higher education by East Asian scholars has been increasing with a strong collaborative orientation toward US universities in Hong Kong, and Japan, Taiwan and Korea (Jung & Horta, 2015). One of the main reasons to explain this fact is that many of their faculty undertake advanced doctorate training in US and maintain strong links with their alma maters or with colleagues from US universities (Lee & Kim, 2010).

Interestingly, not only in Asian countries, but also in western countries, the belief was that overseas-trained doctorates are more privileged to be hired as faculty than home-trained ones in the academic job market. In Canada, for example, the debate on this issue remains today. During the 1960s and 1970s, due to the lack of local PhD programs and the demand of expansion of student enrollment, universities needed to hire foreign-trained doctorates as faculty but this led to the Canadianization movement concerning about the low number of courses with Canadian contents and unfairness for Canadian doctorates in the faculty hiring practices. Wilkinson, Bramadat, Dolynchuk, and Aubin (2013), however, challenge the myth surrounding the belief that foreign-trained sociologists still dominate academics in Canadian universities by examining the number and origin of degrees for recently hired sociology faculty in Canada in 2012. They found that two-thirds (67%) of assistant professors received their doctorate training in Canada. Canadian-trained PhDs are appointed more than not, but with some exceptions, particularly after the amendment of the "hire Canadians first" legislation in 2002. The new rule allows the academic hiring committees to consider foreign academics in the round one for interview and means that foreign candidates have a better chance of being selected for the position (Wilkinson et al., 2013). Hiring committees are required to submit a form to justify why the selected foreign candidate has the qualifications necessary to fulfill the job requirements and why the Canadians on the shortlist were not qualified (Wilkinson et al., 2013).

In Taiwan, the preference to hiring overseas-trained doctorate graduates as faculty over their home-trained counterparts has been assumed but there is a lack of any study or evidence to support it. To fill the literature gap on academic profession in Taiwan, Chiang (2017) examines 28,839 faculty members, representing 81% of the full-time faculty members with PhD degrees, to understand the state-of-the-art characteristics of faculty members in terms of home/overseas PhD holders, graduates of overseas prestigious universities, and academic inbreeding. Her study argues that the situation of hiring overseas-trained doctorate as faculty over home-trained counterparts is

partly supported in the public universities. It also found that 24% of the faculty were graduates from top 100 prestigious universities on the Times Higher Education World University Rankings, and 4% of them were academic inbred. Chiang (2020) further examines the current academic inbreeding in the universities which offer doctorate programs not only in terms of the university's hiring of one's own graduates but also the faculty members with a doctorate from the same university. Her study found that 6% of the faculty members at universities all over Taiwan were academic inbred but the rate of academic inbreeding ranges widely from 0 to 32%. Among 1998 departments examined, the number of departments with faculty graduating from different universities is 393, representing 20% of the sample, and only one department has faculty graduating from the same university, indicating academic inbreeding in terms of hiring faculty who graduated from the same university is not common. Again, the academic network in faculty hiring practice shows relatively weak in Taiwan. However, the questions of which host country and institutions hold the most influence in terms of the size and source of doctorate graduates among academics in Taiwan remain to be addressed.

12.3 Method

12.3.1 Source of Data

For understanding whose doctorate graduates hold a stronger network among academics in Taiwan, the data regarding the host countries and host institutions by which the faculty received their doctoral degrees should be collected. While the existing studies often present a small-scale study or survey of faculty in the particular disciplines and institutions, Chiang (2017, 2020) attempts to expand them to include all full-time doctorate faculty members in the whole higher education system. Chiang's studies collected 35,735 faculty members with doctorates by visiting individual faculty CV profile on the websites of all 157 higher education institutions in Taiwan during the academic year of 2011–2012 to form her dataset. This study continues to use her dataset to further address the research questions across three dimensions as shown in Table 12.1.

After excluding those without doctorate award background, there were total 29,469 individuals, representing 82% of entire full-time faculty with doctoral degree, included as the sample for analysis. According to Table 12.2, among the 14,755 home-trained doctorate graduates, there were 5,733 (19%) and 9,022 (31%) hired as faculty, respectively, in the public and private HEIs. Among the 14,714 overseas-trained doctorate graduates, there were 8,618 (29%) and 6,096 (21%) hired as faculty, respectively, in the public and private HEIs.

Table 12.1 Research questions across three dimensions

	Dimensions	Research questions
1.	Taiwan HEIs' staffing pattern	1. Which is the dominant pattern in all HEIs that have more home-trained than overseas-trained faculty, or vice versa? 2. What are the top 10 public HEIs and 10 private ones that have more overseas-trained than home-trained faculty?
2.	Doctorate host countries	1. Which network, if comparing the size of faculty from different doctorate host countries, is stronger? 2. What is the number of faculty holding doctoral degree awarded by overseas host countries?
3.	Doctorate host institutions	1. Which network, if comparing the size of faculty from different doctorate graduating institutions, is stronger? 2. What are the top 10 host institutions? 3. What are the top three host institutions in each overseas host country?

Source author

Table 12.2 The study sample

	HEIs	Faculty	Home-trained		Overseas-trained	
			Number	%	Number	%
Public	52	14,351	5,733	19	8,618	29
Private	105	15,118	9,022	31	6,096	21
Total	157	29,469	14,755	50	14,714	50

Source author

12.3.2 Method of Treating Data

In this study, a network with stronger influence refers to the size of doctorate graduates hired as faculty in Taiwan. The number and percentage of faculty members whose doctorates came from which of sources, either home or overseas, have been coded and analyzed. The dominant staffing pattern among HEIs in Taiwan refers to institutions that have over half of faculty who were home-trained or overseas-trained. The data about host countries, Taiwan, the US, the UK, Canada, Australia, Germany, France, and Japan, was individually coded. However, the data about host institutions was dealt by hand-count since it is difficult to give a code for more than thousands of host institutions from all over the world.

12.3.3 Limitation of Data

Only full-time faculty members in all ranks with doctorate employed in the academic year of 2011–2012 are represented. Though the data nearly represents the entire

faculty of all higher education institutions in Taiwan, we recognize the data is constantly changing. Therefore, it should be noted that this data is a snapshot of data collected in 2011–2012.

12.4 The Dominant Pattern: The Majority of the HEIs That Have More Home-Trained Than Overseas-Trained Faculty

According to Figs. 12.2 and 12.3, the grey part (for home-trained faculty) occupies a larger area than the dark part. This indicates that HEIs with home-trained

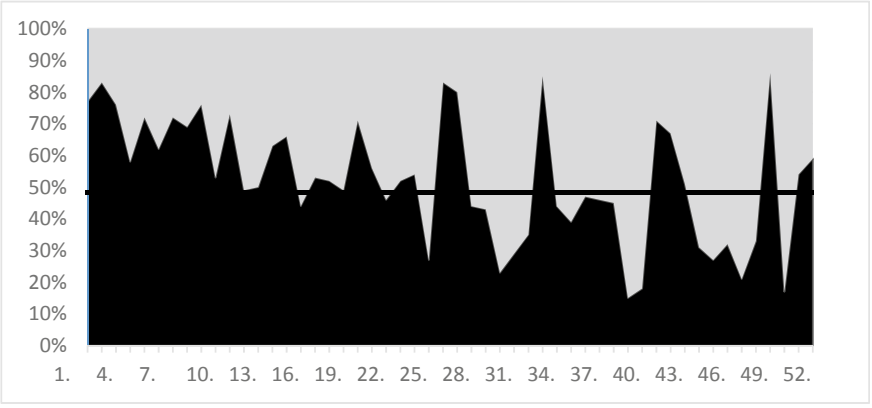

Fig. 12.2 Faculty doctorate profile in 52 public HEIs. *Note* Grey for home-trained faculty. Dark for overseas-trained faculty

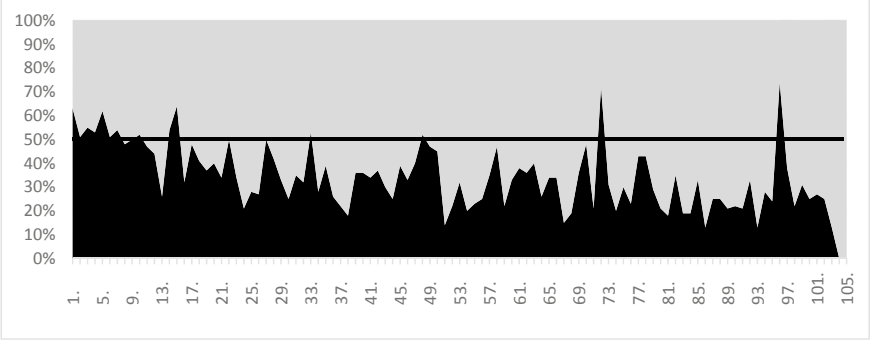

Fig. 12.3 Faculty doctorate profile in 105 private HEIs. *Note* Grey for home-trained faculty. Dark for overseas-trained faculty

over overseas-trained faculty represent the dominant pattern. Among 157 HEIs, the majority of HEIs (111 institutions; 71%) have more home-trained than overseas-trained faculty. Only 46 higher education institutions (29%), 29 public and 17 private institutions, have more overseas-trained than home-trained faculty. Among the public HEIs, the highest percentage of overseas-trained faculty is 85% and the lowest is 15%. Among the private HEIs, the highest percentage is 74% and the lowest is 0%.

Due to the variation between individual institutions and the need to exclude some institutions with a sample size less than 100, the study ranks the top ten of both public and private institutions (Table 12.3) that have over half of the faculty with overseas doctoral degree. Among the top ten public institutions, the National Tsing Hua University (83%) has the highest percentage, followed by the National Chengchi University (77%), the National Taiwan University (76%), the National Sun Yat-sen University (76%), and others. The National Taiwan University of Science and Technology is the only one public technology university on the list. Among the top ten private institutions, the Wenzao Ursuline University of Languages (72%) has the highest percentage, followed by the Shih Hsin University (64%), the Tunghai University (63%), the Tamkang University (62%), and others. In them, there are five private universities that had Catholic or Christian foundation background.

Table 12.3 Top ten institutions with over half of the faculty holding an overseas doctorate degree

Public HEIs			Private HEIs		
Rank	Institution	% of faculty	Rak	Institution	% of faculty
1.	National Tsing Hua University	83	1.	*Wenzao Ursuline University of Languages	72
2.	National Cheng chi University	77	2.	Shih Hsin University	64
3.	National Taiwan University	76	3.	*Tunghai University	63
4.	National Sun Yat-sen University	76	4.	Tamkang University	62
5.	National Chung Cheng University	73	5.	*Soochow University	55
6.	National Cheng Kung University	72	6.	I-SHOU University	54
7.	National Chiao Tung University	72	7.	Feng Chia University	54
8.	National Taiwan University of Science and Technology	71	8.	*Chang Jung Christian University	53
9.	National Central University	69	9.	*Chung Yuan Christian University	53
10.	National Taipei University	66	10.	Yuan Ze University	52

Note *means institutions with Catholic or Christian foundation background

12.5 Taiwan and the US Having Stronger Network Among Host Countries

Table 12.4 indicates the host countries where faculty received their doctoral degree. Obviously, Taiwan and the US are the two main host countries. There are 14,755 from Taiwan, and 10,864 from the US, accounting for 87% of the whole sample. Aside from the US, doctorate graduates from other overseas countries represent a small proportion of the sample. They are, 1,368 (5%) from the UK, 957 (3%) from Japan, and 548 (2%) from Germany. Among them, the faculty who graduated from the English-speaking countries holds the dominant network, if compared to those from European and Asian countries. There are 12,552 faculty members, 43% of the whole sample or 85% of the overseas-trained faculty, receiving their doctorate training from English-speaking countries. There are only 1,060 faculty members (4% of the whole sample or 7% of the overseas-trained faculty) receiving their doctorate training from Asian countries and 860 (3% of the whole sample or 6% of the overseas-trained faculty) from the European countries. Compared to other countries in their own regions, Japan in Asia and Germany in Europe are the top one countries to have the highest number of doctorate graduates hired as faculty in Taiwan. The overall dominant pattern among overseas host countries/regions is further illustrated in Fig. 12.4.

Table 12.4 Host countries of doctorate degree held by the faculty

Host country	Total number	% of the sample	% of the overseas-trained faculty
Taiwan	14,755	50	–
English-speaking countries	**12,552**	**43**	**85**
US	10,864	37	74
UK	1,368	5	9
Australia	215	1	1
Canada	105	0	0
Asian countries	**1,060**	**4**	**7**
Japan	957	3	7
Hong Kong	54	0	0
Philippines	38	0	0
Singapore	11	0	0
European countries	**860**	**3**	**6**
Germany	548	2	4
France	244	1	2
Belgium	36	0	0
Netherlands	19	0	0
Sweden	13	0	0

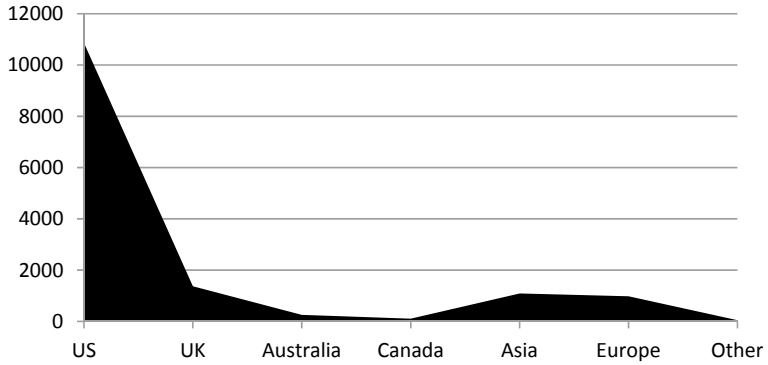

Fig. 12.4 Dominant pattern among overseas host countries/regions

12.6 Host Institutions with the Stronger Network

In terms of doctorate alumni size, the top ten host institutions are listed in Table 12.5. They are 9 institutions from Taiwan and one from the US. There are over one-third of the faculty members (11,320; 38%) trained from them. Among them, the number varies. It is very clear that the doctorate graduates from the National Taiwan University as faculty outnumbers the second one, the National Cheng Kung University, and the third one, the National Chiao Tung University. Of the whole sample, one out of five faculty members in Taiwan graduated from these three institutions. Among them, only one institution from the US is the University of California, ranked as seventh place.

Table 12.5 Top ten host institutions

Rank	Host institution	Graduates (% of the sample)	Rank	Host institution	Graduates (% of the sample)
1	National Taiwan University	3,048 (10%)	6	National Taiwan Normal University	856 (3%)
2	National Cheng Kung University	1,526 (5%)	7	University of California (US)	794 (3%)
3	National Chiao Tung University	1,223 (4%)	8	National Central University	676 (2%)
4	National Chengchi University	940 (3%)	9	National Sun Yat-sen University	676 (2%)
5	National Tsing Hua University	926 (3%)	10	National Taiwan University of Science and Technology	655 (2%)

A further analysis of the top three host institutions per overseas countries is presented in Table 12.6. The top three institutions from the US are the University of California, University of Texas, and University of Illinois. The top three institutions from the UK are the University of London, the University of Cambridge, and the University of Manchester. The top three institutions from Australia are the University of Queensland, the Queensland University of Technology, and the University of New South Wales. The top three institutions from Canada are the University of Toronto, the McGill University, and the University of British Columbia. The top three institutions from Japan are the University of Tokyo, the Osaka University, and the Kyushu University. The top three institutions from Germany are the Ludwig-Maximilians-Universität München, the Eberhard Karls Universität Tübingen, and the Ruprecht-Karls-Universität Heidelberg. The top three institutions from France are the Université Paris I Panthéon-Sorbonne, the Université Paris Diderot- Paris VII,

Table 12.6 Top three host institutions per overseas country

Country	1st place	2nd place	3rd place
US (Total: 10,864)	University of California[1]	University of Texas[1]	University of Illinois[1]
	794 (7%)	475 (4%)	379 (3%)
UK (Total: 1,368)	University of London	University of Cambridge	University of Manchester
	154 (11%)	94 (7%)	79 (6%)
Australia (Total: 215)	University of Queensland	Queensland University of Technology	University of New South Wales
	24 (11%)	20 (9%)	19 (9%)
Canada (Total: 105)	University of Toronto	McGill University	University of British Columbia
	18 (17%)	13 (12%)	12 (11%)
Japan (Total: 957)	University of Tokyo	Osaka University	Kyushu University
	157 (16%)	50 (5%)	49 (5%)
Germany (Total: 548)	Ludwig-Maximilians-Universität München	Eberhard Karls Universität Tübingen	Ruprecht-Karls-Universität Heidelberg
	76 (14%)	34 (6%)	31 (6%)
France (Total: 244)	Université Paris I Panthéon-Sorbonne	Université Paris Diderot - Paris VII	Université Paris-Sorbonne (Paris IV)
	25 (10%)	19 (8%)	15 (6%)

Note Within the systems, the universities with the highest number of doctorate alumni as faculty in Taiwan, respectively, are the University of California, Berkeley with 216 alumni, the University of Texas at Austin with 299 alumni, and the University of Illinois at Urbana-Champaign with 187 alumni

and the Université Paris-Sorbonne (Paris IV). The sum of the percentages of doctorate graduates from the top three institutions per country reveals the presence of concentration. The concentration varies, from high to low, Canada (40%), Australia (29%), Japan (26%) and Germany (26%), UK (24%), and France (24%). However, faculty members with American doctorate degrees awarded by the top three institutions represent only 14%.

12.7 Discussion

A policy aiming at avoiding nepotism in faculty hiring (e.g. Collins, 1998) and recruiting faculty with diversified doctorate training backgrounds to enhance teaching, research, and service is required for the well-being of higher education institutions. It is interesting to use Taiwan as a case study to re-examine the presence of the so-called Asian-pattern in faculty hiring practice, especially since Taiwan has increased its capacity to provide doctoral education at home since the 1990s. Based on the study results, the so-called Asian-pattern still remains. As South Korea (e.g. Jung, 2018; Shin et al. 2014), the dominant pattern of America-trained doctorate graduates over graduates from other overseas countries, the limited range of doctorate host country, and the major research universities more likely to hire overseas-trained doctorates than home-trained ones, still remain stable in academia in Taiwan. However, this study challenges the myth surrounding the belief that overseas-trained doctorate graduates still dominate academics in Taiwan. The findings demonstrated that home-trained doctorates represent half of academics, and one out of five graduated from the top three home institutions.

Beyond the studies on the academic inbreeding by the author (Chiang, 2017, 2020), this study, again, found that the academic network of faculty based on their origin country and institution of their doctorate education shows relatively weak in the faculty hiring practice in Taiwan. Even though doctorates from the National Taiwan University holding the strongest network among faculty in Taiwan, it represents only 10% of the whole sample. The institutionalization of the formal procedures, from public advertisement through to three-tier selection committee, might partly explain the weak academic network of faculty based on their origin country and institution of doctorate education in faculty hiring process in Taiwan. This formalization has minimized the power to be operated by the stronger academic networks to favor particular new hiring. Thus, this study argues that the stronger size of the network does not directly mean the influential power the network assumes when the faculty hiring practices are meritocratic-oriented and transparent. As Välimaa et al. (2016) suggest, network power plays as a "soft power" with the capacity "to influence people, enmeshed in protocols and standards in order to avoid exclusion" and "have the power to accept or reject new members" into the network (p. 33). However, emphasizing either the academic network or meritocracy might not be a healthy one for academic development since academic network still plays as a critical channel

for collaborative research, information sharing, and academic career development (Shin et al., 2016).

The empirical study (Leporia et al., 2015) reminds that improving the general conditions of the academic system is more important than attracting overseas returnees for internationalization per se, and suggests that the balance between opening and favoring national candidates, as well as the measures to promote international mobility, need to be carefully tailored to the situation in each country and individual HEIs. In Taiwan, the debate regarding whether the current higher education system is producing too many doctorates continues as the faculty positions are limited. One can debate whether all this is a good thing or a bad thing. However, my point here is that the current doctoral education system must provide a new and innovative approach to develop advanced knowledge and skills suitable for careers beyond being an academic (e.g. Baschung, 2016; Bogle, 2017) to further strengthen home-trained doctorate graduates.

12.8 Conclusion and Implication

This is the first study to explicitly reveal which host countries' and host institutions' doctorate graduates hold a stronger network among academics in Taiwan. Among 157 higher education institutions, the majority of them (111 institutions; 71%) have more home-trained than overseas-trained faculty. Among the host countries, Taiwan and the US are the two main host countries. It indicates the limited range of host countries. Among the top ten host institutions, there are nine institutions from Taiwan but only one from the US. The only US institution in the top ten is the University of California. The findings also indicates the US-trained faculty over other host overseas countries, the faculty trained by the English-speaking countries-trained over those from Asian and European countries, and the faculty trained by the National Taiwan University over other host institutions. This research also allows overseas host countries to know more about the number of their doctorate graduates who work as faculty in Taiwan, and fosters the younger generation to make decision about where to pursue their doctorate, either at home or overseas. This study is not claimed to be exhaustive or definitive but rather to further disclose the reality about the academic networks based on faculty's origin of doctorate education in Taiwan. Thus, the implications for faculty hiring practice and further studies are proposed as follows.

For faculty hiring practice, first, diversity in doctorate training background should be taken into account in faculty hiring practices to balance the current over-reliance on home-trained and US-trained doctorate graduates. Second, a well-developed, but not weak, academic network with institutionalized meritocracy is a key to the competitiveness of universities in the long run to minimize the negative impacts on academic development and open up the academic networks to other scholars. Third, the further debate about the quality and health of organization reflected in the composition of faculty in Taiwan needs to be fuelled up, instead of remaining silent about who holds stronger network power and what changes take place over time. A homogeneous

university which does not critically examine itself will soon become outdated and irrelevant. We must maintain the periodical review and lively debates on the issue of who the faculty members are and what academic training backgrounds they are associated with. This will bring impacts on the well-being of universities.

For further study, first, obtaining the objective and complete data of the faculty profile is required as a solid base and reference before any discussion and critique can be made about the changes in academic profession. Second, other methods, such as in-depth interviews with home-trained and overseas-trained faculty, can be adopted to understand how their doctorate training networks have impacts on their perceptions, behaviors, and performance toward their scholarship. Third, comparative studies with other Asian countries are also interesting, as many of them have encountered with the similar trends on reliance on the US-trained doctorate graduates. Finally, keeping record of the number of home-trained doctorates working in universities abroad to assess the impact of Taiwan's doctorate training programs would be beneficial.

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