Competing for Academic Labor: Research and Recruitment Outside the Academic Center

Yasmin Y Ortiga, Meng-Hsuan Chou, and Jue Wang

First published: 23 June 2020

Minerva

https://doi.org/10.1007/s11024-020-09412-7

Abstract

Increasing competition among research universities has spurred a race to recruit academic labor to staff research teams, graduate programs, and laboratories. Yet, often ignored is how such efforts entail negotiating a pervasive hierarchy of universities, where elite institutions in the West continue to attract the best students and researchers across the world. Based on qualitative interviews with 59 Singapore-based faculty, this paper demonstrates how migrant academics in competitive universities outside the West take on the burden of seeking other ways of attracting academic labor into their institutions, often resorting to ethnic and transnational ties to circumvent limits imposed by a hierarchical higher education landscape. Those unable to utilize these transnational strategies are less likely to maintain the pace of productivity expected by their institutions, heightening anxieties regarding tenure and promotion. In examining the Singapore case, this paper reveals the disjunctures between the increasing pressures of growing universities eager to compete in a global higher education system, and the everyday realities of academic production within these institutions.

Keywords

Academic mobility
Higher education
Neoliberalism
PhD students
Postdocs
Singapore

Introduction

Current scholarship has seen a burgeoning literature on the “neoliberal turn” in higher education, where principles of the market push universities to redirect institutional goals towards outranking and outprofiting each other (Ball 2015; Olssen and Peters 2005; Stack 2013). In critiquing the neoliberal university, existing studies have mostly focused on how administrators and government agencies promote profit-oriented policies within higher education institutions, often undermining the everyday work of teaching and research. Few scholars have examined what Cantwell (2015: 488) calls *academic production* or the

"micro-level work" of generating research output within colleges and universities. Given that research (as evaluated through rankings) enhances elite universities' "prestige, 'brand' power and ultimately their resource accumulation" (Marginson 2013: 358), the realization of an institution's market-like strategies depends on its faculty's ability to pursue grants, manage research laboratories, and write academic manuscripts. As such, these tasks serve as the "building blocks" of academic capitalism that keep the neoliberal university running (Cantwell 2015).

This paper focuses on an early, yet integral, aspect of the academic production process: the task of recruiting academic labor behind the university's knowledge production. In order for universities to become "globally competitive," individual academics must hire postdoctoral researchers (postdocs) and PhD students to staff their research teams, graduate programs, and laboratories (Ackers 2008; Bozeman and Youtie 2018; Cantwell 2011). Pressures to produce more research output also amplify the need to hire "competent" academic labor, as faculty lean heavily on junior researchers and PhD students to run research projects and take on compulsory teaching duties, including mentoring undergraduates (see Müller 2014).

While much has been said about how universities compete to attract academic labor, often ignored is how such recruitment tasks entail negotiating a pervasive hierarchy of universities, where elite institutions in the West continue to attract the best students and researchers across the world. How do emerging universities compete in this global hierarchy? What are the strategies their faculties employ to staff their research teams with the best-and-brightest? Situating our study in the context of Singapore, a fast-growing education hub in Southeast Asia, this paper shows how academics outside elite institutions have tapped into ethnic and national networks as a means of working around this unequal higher education landscape. In particular, migrant academics utilize their knowledge of and ties to institutions within their home countries, seeking ways to bring students and researchers into Singapore universities. Those who are unable to utilize these transnational networks face greater challenges to maintain the pace of productivity expected by their institutions, heightening their anxieties regarding tenure and promotion. In this sense, the inability to successfully recruit PhD students and postdocs affects not only academics' individual research productivity but exacerbates their precarious status in a competitive neoliberal university.

This paper concludes with a discussion on how recruitment woes within rising education hubs like Singapore reveal the disjunctures between the high expectations of competitive universities and the everyday realities of academic

production within these institutions. In doing so, this paper calls for a more contextual view of the processes that drive academic production as more universities from a diversity of nations join the competition for higher education prestige (Bonaccorsi, Daraio, and Geuna 2010; Naidoo 2016).

The Internationalization of Academic Production: Recruiting on a Global Scale

In the last few decades, the competition for academic labor has become increasingly internationalized, with a large proportion of university programs comprising foreign students and researchers from different countries of origin (Tanyildiz 2015; Kim 2017). Scholars have attributed this shift to the growing pool of graduate students and researchers across the world as well as poor academic job prospects in many countries (Bauder 2015; Carozza and Minucci 2014). While migration scholars have examined how students and junior researchers formulate migration decisions and negotiate opportunities beyond their home nations (Findlay 2011; King and Raghuram 2013; Koh and Sin 2019), often lacking is how efforts to attract and hire academic labor is integrated into the everyday work of individual faculty members trying to meet their universities' research demands.

In particular, Cantwell (2011) argues that professors and senior researchers have come to serve as "buyers" in a global labor market of postdocs and graduate students looking to "sell" their knowledge and skills. By channeling academic labor into their universities, these buyers play an integral role in "maximizing the competitiveness of their research enterprise" (p. 329). Yet, ironically, it is this very enterprise that also subjects them to increasing demands for knowledge products and research output. While researchers have studied the competition over academic labor, most empirical cases of this phenomenon are located in places like the US and UK (see Cerna 2016). Certainly, such countries are significant in terms of the large number of international students, postdocs, and academics that they receive each year. However, these nations also possess particular advantages that make the task of "buying" academic labor considerably different and unique.

In particular, scholars have shown how postdocs and graduate students are strongly driven towards academic "centers" or places with a high concentration of prestigious institutions, qualified researchers, and resources for specialized research (Jöns and Hoyler 2013; Mahroum 2000). Drawing heavily from the work of Pierre Bourdieu, studies on international students have portrayed the pursuit of Western degrees as a means of accumulating *cultural capital* or the behaviors, knowledge, and affiliations that allow individuals to reproduce their

social status (Perkins and Neumayer 2014; Waters 2006, 2009). Similarly, research has shown how junior scientists and scholars move toward academic centers to access influential scholarly networks that, in turn, open doors to better career opportunities in the future (Burris 2004; Sidhu, Yeoh, and Chang 2015).

In this sense, the international migration of academic labor reflects a distinct hierarchy of higher education systems. If the cross-border movement of students and junior scholars is driven by a desire for cultural capital, institutional efforts to attract these individuals depend on *symbolic capital* or the social recognition provided by a particular university's credentials (Gerhards, Hans, and Drewski 2018; Marginson and van der Wende 2007). Thus, countries with a large number of elite institutions (like the US and UK) possess skewed power in attracting top talents (Kim 2010). Meanwhile, nations at the lower rung of this hierarchy are seen as places populated with "smaller and weaker institutions" with less resources and "lower academic standards" (Altbach 2006: 124). Therefore, while many factors can define individual migration trajectories,[1] higher education institutions often leverage on their status and reputation in attracting potential postdocs and graduate students (Sidhu, Ho, and Yeoh 2019).

However, scholars have also questioned the tendency to define global higher education as a clean division between academic centers and those at the margins. In their own study on mobile academics in Canada and Germany, Bauder and his colleagues (2018) found that mobile academics ranked institutions in "nested hierarchies" (p. 57), where universities located within one country can possess very different levels of symbolic capital. Individual imaginations of which places provide the most cultural capital are also complicated by the aggressive development of research universities in Asia and the Middle East. Philip Altbach (2006) defines these nations as "aspiring centers," where select public institutions have climbed university world rankings and produce highly cited research, despite lacking the prestige associated with elite institutions in the West.

A number of scholars have come to recognize how universities within aspiring centers compete aggressively for academic labor and were successful (Cerna and Chou 2014; Li and Lowe 2016). Yet, these studies also tend to describe such efforts in terms of macro state policies offering higher wages, better benefits and more generous research funding opportunities (see Gopinathan 2007; Sidhu, Ho, and Yeoh 2011). There is little understanding as to how individual faculties negotiate the task of seeking academic labor for their own research and teaching needs, and whether existing state policies truly aid their recruitment efforts.

What remains clear is that aspiring universities are eager to attain the same status as elite counterparts in the West, and therefore apply similar pressures on its faculty to produce research of the same prestige and at least at the same pace, but more often greater. Growing universities recruit migrant academics with an expectation that these individuals will drive academic production to enhance their institutions' status in the global higher education landscape (Ortiga, Chou, Sondhi, and Wang 2018; Li and Lowe 2016; Paul and Long 2016). Yet, these migrant academics must find ways to do so without the many advantages that their peers working at academic centers have in recruiting academic labor. In the end, academics who are unable to meet the requirements of the neoliberal university are at risk of losing their jobs, which in some countries also means a loss of work visas and residency. In the following sections, we discuss how the case of Singapore provides a view as to how academics within aspirational universities cope with these co-existing pressures to deliver.

Singapore as a Destination for Academic Labor

The Singapore case has served as an example of how market-like strategies in higher education can transform local universities into key players in a global competition for knowledge production. In the early 2000s, Singapore corporatized its two national universities, transforming them from statutory government boards to more autonomous institutions (Gopinathan 2007). Scholars have also highlighted Singapore government efforts to create an environment for research and innovation: the disbursement of large research funds, the construction of "world-class" facilities, and partnerships with Ivy League institutions such as Yale and MIT (Paul and Long 2016; Sidhu, Ho, and Yeoh 2019). Such initiatives have narrowed the gap between Singapore universities and the elite institutions that have long dominated the global higher education landscape.

However, beyond infrastructural changes, one of the Singapore's main strategies in building its universities has been the aggressive recruitment of foreign faculty and students (Ng 2013). Singapore is one example of a system wherein the need for academic staff is greater than the supply of qualified local citizens (Rostan and Ceravolo 2015). As such, Singapore universities and research institutions have sought to attract PhD holders from some of the most prestigious universities in the world to join their faculty ranks, offering generous compensation packages and research funding that rival those offered by Western countries (Gopinathan and Lee 2011). Such offers have been particularly attractive to Asia-born scholars hoping to move closer to aging parents in the region while also working within a reputable university with strong resources for research (Ortiga, Chou,

Sondhi, and Wang 2019). Foreign-born scholars account for more than 60% of tenure-track and tenured faculty within the country (Paul and Long 2016).

The growth of Singapore universities also attracted a large number of international doctoral students and postdocs. National and institutional policies approach their recruitment as part of the universities' roles in fulfilling national human resource development plan. What this means in practice is that Singapore's policies towards the recruitment of postdoctoral fellows and PhD students do not operate in isolation and are part of a comprehensive economic strategy of attracting what the state has called "foreign talents."

Previous research has provided rich insight into the motivations and desires that move PhD students and postdocs towards Singapore (Paul 2018; Sidhu, Yeoh, and Chang 2015). Results from these studies reflect the conventional trend of cultural capital accumulation, as students and postdocs seek to take advantage of the training, infrastructure, and exposure afforded by Singapore's competitive academic programs. Yet, these studies also reveal underlying anxieties on whether such resources can truly lead to future success, given Singapore's "aspiring" status in the global higher education hierarchy. Francis Collins and his colleagues (2014) argue that, for doctoral students, there is a strong narrative of hope in how they imagine their Singapore degrees can enhance their status as globally competitive scholars. However, aspects of this desired transformation remain tenuous and uncertain. While there are students who desire to stay in Singapore, their university experiences make them feel isolated from broader society, and immigration policies constrain their opportunities for permanent residency (Ge and Ho 2018).

Meanwhile, Sidhu and her colleagues (2015) describe how foreign postdocs often worry about whether their Singapore credentials will be recognized in other desired destinations. For postdocs who had obtained their doctoral degrees from institutions in the US and Western Europe, there is a general concern that moving away from these traditional academic centers has undermined their ability to return. In many ways, such anxieties are not unique to Singapore. There is a small but growing literature on the difficulties and apprehensions faced by junior researchers and students moving to education hubs outside the West (see Austin, Chapman, Farah, Wilson, and Ridge 2014; S. Kim 2016).

The challenges in recruiting competitive PhD students and postdocs add to the many stresses that academics face in Singapore. Within a small nation like Singapore, academics denied tenure at one institution are unlikely to find a similar academic position in another Singapore university. As such, most academics unable to establish themselves in Singapore institutions move out of

the country or move out of academia. The following sections discuss how Singapore-based academics negotiate these challenges on the ground, enacting their own personal strategies in channeling students and postdocs into their universities.

Method

This paper is based on qualitative interviews with 59 migrant academics (24 tenured and 35 tenure-track) working in Singapore at the time of our research study (2015–2017). We define "migrant academics" as faculty members who were born or educated overseas but moved to Singapore to take on faculty positions within its universities. This study is limited in that we were unable to interview faculty who never moved internationally for graduate study or work.[2] By focusing on migrant academics, we were particularly interested in how migrant academics might mobilize their international resources in recruiting academic labor.

We interviewed a total of 23 women and 36 men, all employed at three of Singapore's major universities (National University of Singapore, Nanyang Technological University, and Singapore Management University). The research team recruited interviewees by sending invitation emails to faculty members from two major fields: Science, Technology, Engineering and Math (STEM); and the Social and Behavioral Sciences.[3] We then asked interviewees to connect us to other colleagues who might be interested in participating in the project ("snowball" sampling). To supplement this recruitment method, team members promoted the project at university workshops and events, distributing fliers with project details to interested faculty members. Table 1 shows the breakdown of the sample by country of origin and by discipline (STEM, Social Science, Humanities, and Professional Schools).

Table 1

Interview Participants' Countries of Origin

Country of Origin	
China	13
India	10
US	5
Malaysia	4
Australia	3
France	3

Country of Origin	
UK	3
Japan	3
Taiwan	3
Germany	2
Indonesia	2
Thailand	2
Others	6
Total	59

Interview questions centered on participants' decision to come to Singapore, their work experience within Singapore universities, their research activities both within and outside Singapore, and their academic collaborations. All interviews were transcribed and analyzed using NVivo, a qualitative data analysis software. In coding our data, we examined themes related to the benefits and difficulties that migrant academics encountered within Singapore universities. While interviewees expressed a range of challenges in their work, we found that the topic of recruiting academic labor was one of the most prominent themes. In particular, most of our interviewees shared their struggles in recruiting what they called "good" PhD students and postdocs. There were clear differences across different disciplines. For example, academics who conducted experimental work were more dependent on PhD students and postdocs to conduct their research. Meanwhile, faculty from the social sciences talked more about the need for graduate students who could serve as teaching assistants. However, migrant academics across different disciplines relied on some general strategies in coping with the lack of qualified postdocs and PhD students. This paper focuses on these strategies and how they reflect the anxieties and pressures of driving academic production within aspiring centers like Singapore.

Seeking Academic Labor

The ability to recruit PhD students and postdocs was an integral part of migrant academics' productivity in Singapore. In line with current literature, migrant academics in this study shared that having doctoral students and postdocs freed time for other tasks such as writing publications and developing other projects (Akerlind 2005; Ge and Ho 2018). This was especially the case for individuals working in experimental fields. As one assistant professor from the sciences explained, "A decent lab will need at least ten people. To investigate a research

question, basically our work is trial and error. You need to do many trials to get a good result, so you need a lot of people to run experiments." In seeking the "ideal" academic labor, interviewees handling large projects sought postdocs who could work independently and train other students working in the laboratory. PhD students were a good alternative, but not the best option because they often had to balance research work with coursework commitments. Meanwhile, undergraduate students were seen as a "last resort" because they still needed to learn important aspects of research work such as laboratory techniques, using data analysis software, and analytical writing. Beyond laboratory work, PhD students and postdocs also served as collaborators, helping academics to develop new ideas for publications. One assistant professor from the social sciences explained,

> I do mostly historical and ethnographic research so I have been working on my own mostly. But when I was in the US, I still worked with graduate students and that really helped my research. For example, I co-authored three papers with three different graduate students. I had that kind of collaboration. I can still hire undergraduates for my research assistants, but they are different from PhD students.

While postdocs were an ideal resource for research, PhD students also served as important labor for teaching, especially for faculty who taught general education courses in the university. Interviewees shared that, while there were good graduate programs in Singapore, they lack qualified PhD students to help teach the large number of tutorials in their universities when they could dedicate their teaching hours to specialized seminars. One associate professor in the social sciences shared, "Before I got a PhD student, I had to grade everything so this was quite time consuming. That was a big cost." She noted that none of her former professors during her graduate school years actually graded undergraduate work because the university had such a large pool of PhD students.

Interviewees acknowledged that the Singapore state does provide generous funds for faculty to find research staff. Interviewees from experimental STEM fields, where the need for academic labor was crucial for lab work, admitted that generous government funds allowed them to build their research teams without having to worry about where to source money to pay people's salaries, a luxury that few of their counterparts in the West were able to enjoy. As stated by one associate professor in the sciences,

> When I talk to my friends [in Europe] and who do a similar job, I know that I am privileged. The size of my lab is much bigger than what I could expect to have in Europe or probably in the US as well. The reason why my group is big is because my PhD students are all on scholarships and I don't pay their scholarships. The system really allows you to have a lot of students as long as you can manage them.

On the other hand, despite these sources of support, the migrant academics interviewed also struggled with finding people to hire for their research. The following sections outline these issues.

Recruitment Woes in the Aspiring Center

Migrant academics in Singapore faced a paradoxical situation. On the one hand, Singaporean universities continue to be known as one of the best institutions for undergraduate training and education. Intense requirements for entry to the undergraduate programs meant that faculty taught a select pool of highly capable Singaporean undergraduate students. However, Singaporeans interested in pursuing academic careers often pursued their degrees overseas, and with generous funding from the government or other funding agencies (Lee, Goh, and Fredriksen 2008). Given that it was so rare to find a Singaporean willing to stay long-term as a PhD student, academics often had to make do with a largely undergraduate pool of labor. Interviewees explained that while many Singaporean undergraduates were competent researchers, not all research tasks could be delegated to them. As shared by an assistant professor in the social sciences,

> Even if I get research money, I cannot find good research assistants. I hire undergraduates then spend a considerable amount of time training them. I got so tired so I stopped hiring. I do all the work…I actually do quantitative work. There's data cleaning, there's literature research. I cannot hire students who can do this type of work.

At the same time, migrant academics struggled to attract more qualified PhD students and postdocs from overseas into their universities' graduate programs. As noted by one associate professor from the sciences,

> I feel it was easier when I was in the US, especially in getting international postdocs. I feel it's getting better, but even from the

> region, people who end up coming here for postdocs are typically those who want to use this as a steppingstone to move on. I find that this is a common experience among faculty. They find it hard to get good quality postdocs here as opposed to elsewhere.

In the case of PhD students, interviewees attributed their recruitment woes to the fact that credentials from Singapore universities did not afford PhD graduates as much mobility as other institutions in the West. As explained by one associate professor in the social sciences,

> The [university's] rank has gone up but what would you be able to do with a PhD from Singapore? If you could plan to be an academic in the region, that's good, but if your sights are set further than that, it will be an issue…Like, for example, this year, we got quite a lot of applications as compared to previous years. But most of our students are still from within the region, not from outside the region.

This professor's statement showed that despite Singapore's growing prominence in international university rankings, the symbolic capital offered by its universities continued to fall within an implicit hierarchy of institutions that still favor traditional centers of knowledge production in the West. This challenge was even more difficult for postdocs. While Singapore institutions offered wages competitive to the US and Europe, postdocs generally saw a move to Singapore as a risk, especially in fields where Singaporean universities were less established. Paul's (2018) work indicates that even Singapore-based scientists explicitly advise their PhD graduates to look for postdoc opportunities in the West. Aspiring academics (who then take on the work of PhD students and postdocs) seeking a broader range of opportunities were then less likely to see Singapore universities as a place that can grant them the best credentials to obtain their desired jobs. As a result, interviewees admitted that the postdocs who stay in Singapore were less well-trained and less independent than those they encountered in their previous institutions in the US or UK. One associate professor in the sciences explained,

> So in the US, most labs are postdoc-driven. In Singapore, they are largely [undergraduate] student-driven and that's primarily because the quality of postdocs in general are not that strong and good…Postdocs who are trained can not only manage their own work but also help some of these young kids who come into the lab. So when postdocs are not trained themselves, they don't

> function in the way you would like them to perform. That's where the difficulty comes in.

Similarly, most PhD students within Singapore institutions come from nearby countries in the region, often with less social and cultural capital compared to co-ethnic counterparts who qualified for programs in the US or Europe. Our interviews thus suggest that the best researchers still look towards the West, and those with less prestigious credentials or less experience are those who would consider applying to Singapore universities.

In some cases, Singapore-based academics were able to develop a reputation within their particular fields and used this status to attract people to join their research teams. However, such strategies were more viable for senior academics who moved to Singapore after developing their careers overseas. Junior faculty who come to Singapore straight after graduate school often did not have enough of a reputation to attract students and postdocs, even if they had the research funding to do so. One assistant professor in the sciences explained,

> I hope to get more PhD students but I always just get a few masters students. [Master's students] are just here for one year so they have no interest to really go into a topic. I think PhD students prefer to choose more senior professors…so I just work by myself.

Interviewees recognized that less prestigious institutions in the West can also struggle with recruitment. Yet, in line with Cantwell's (2011) argument, bigger nations like the US were also popular destination for permanent settlement. Singapore-based academics then faced the challenge of marketing Singapore as a place for students and postdocs to pursue their careers, as well as a good place to live and possibly settle down.

The lack of capable PhD students and postdocs also affects teaching work, as professors are unable to delegate teaching tasks to capable tutors and teaching assistants. This issue affected interviewees across disciplines. One assistant professor in the social sciences shared,

> Because there are so few PhD students, we only get a tutor when we have more than a hundred students. Another problem is that the graduate students are not that – I mean some of them are really good, smart, but they are not comparable to the students in US. Their English is probably not good and they don't have as

> much training so sometimes students may come out more confused.

In many cases, these interviewees ended up taking on the work themselves, devoting extra time to meeting students one-on-one, or sitting in on discussion sections. These practices were time-consuming and affected the pace of their productivity, yet interviewees felt they could do little to change their situation even with government funds. These struggles reveal how Singapore-based academics are more likely to take on research and teaching work on their own, given the difficulty in finding the "right" postdocs and PhD students. In many ways, the availability of skilled labor power for research work is a factor that government funds have not been able to fully compensate for, as junior Singapore-based academics are limited by their lack of professional prestige, and Singapore's status in the global hierarchy of universities. The next section outlines how migrant academics in Singapore work around these limitations, seeking other ways of attracting the labor they need to run their research.

Recruiting from Home: Co-ethnic and Co-national Networks

Given the limitations of recruiting local students, Singapore-based faculty turned to ethnic and transnational ties within the region. In particular, migrant academics from, and have good connections, within Asia were most successful in utilizing this strategy, leveraging on transnational links to institutions within their home countries in recruiting labor for their research groups. In some ways, this practice reflects the findings of migration studies on how ethnic networks lead to the development of ethnic niches within labor markets in destination countries like the US (see Eckstein and Peri 2018). Among the Singapore-based academics in our study, interviewees also observed a tendency for PhD applicants to reach out to professors with similar racial or ethnic backgrounds. They attributed such trends to some students' desire to stay within their "comfort zone" and seek potential supervisors who might speak the same language or share the same cultural background. On the other hand, our interviews revealed how academics can also create such patterns deliberately, building research groups through informal networks with colleagues in their home countries. As an assistant professor in engineering explained,

> The one thing actually is we need to talk to people. I have several friends, who are faculty in China. I talk to them, ask them to send their good student to here…You need to go to China and talk to them, show your research, show your results, show your standing in the world. You have to tell people that now Singapore has high

> standing in the world so that's why they should come to here. You also can tell them the salary here and then compare to USA. Here is a little bit higher.

This statement shows how individual faculty facilitate the movement of PhD students and postdocs, not only by offering economic and career opportunities (i.e. high salaries and "good standing"), but by also convincing academic supervisors to encourage their students to move to Singapore. Migrant academics in our study were well aware that they could not simply depend on wages and research grants in enticing students to enter universities in Singapore. Rather, they would need to rely on the approval and reassurance of these students' mentors. As such, these interviewees took on the work of seeking out their own academic labor, taking extra trips to their home countries, and spending time reaching out to co-national scholars based in these places. Interviewees shared that they did not limit themselves to the countries' "top" institutions, and often deliberately sought out productive students from less prestigious institutions. As noted by one associate professor in the applied sciences,

> I visited some places in China, just two universities in Beijing. That didn't really help in terms of getting PhD students because in those top universities, the students are so good that they can get into many good places in US…I think sometimes you don't really need people from the very top places. If they're interested and they're willing to put in effort, then [they can come work for me].

This strategy of relying on personal ties was more essential for migrant academics in STEM fields and also more fruitful among Asia-born migrant academics who maintained strong ties to their home country. This is not to say that all Asia-born academics utilized this strategy well, or that non-Asian faculty members were incapable of establishing links with counterparts in their home countries. In one case, an assistant professor from an eastern European nation was able to use a specific scholarship for students from "non-traditional" countries to recruit PhD students for his laboratory. Funded by the Singapore government, this scholarship was specifically for students who came from countries beyond Southeast Asia, China, or India. He proudly shared how friends in his home country helped him find students for himself and his colleagues as well. However, this professor also admitted that he was the only one in his department able to enact this strategy. Colleagues from other "non-traditional" source countries in Europe were unable to bring students to Singapore. He explained,

> In the last five, six years, we had maybe one or two PhD students from the UK. If you go to some places like Czech Republic, Slovakia, Poland, they don't want to go anywhere. They just want to stay in Europe…Nobody wants to come.

These accounts show how European and American faculty face the extra challenge of getting students to move a longer distance to Singapore. While some universities in the West may be open to international degrees, a large number of higher education systems in Europe favor PhD graduates from within the region or the nation, thus discouraging aspiring academics from pursuing graduate degrees in institutions beyond the West. These particular challenges counter the assumption that knowledge workers would willingly move across the globe to pursue their scientific work. Singapore-based academics also acknowledged that postdocs and PhD students in the West are also closer to a higher concentration of research institutes or universities, creating more competition among professors seeking their expertise. In contrast, Asia-born academics can market Singapore to co-nationals who do not wish to move too far away from their home countries, or seek to enhance their work experience before looking for opportunities in the West. Asia-born academics must then utilize their knowledge of local higher education systems in seeking potential applicants who may not be "the best" students or postdocs at the time of recruitment, yet still provide the relevant and needed expertise and skill.

For many American and European academics in Singapore, the task of evaluating potential students and postdocs from less prestigious institutions within the region was an arduous process, given their lack of knowledge of local higher education contexts. As noted by Musselin (2004), "Recruiting foreign candidates requires from recruiters knowledge about the foreign country's rules" (p.65). Academics seeking to hire postdocs and PhD students needed to be aware of norms and informal rules in source countries, as well as the language for work. As such, Chinese and Indian academics had a distinct advantage, given that the majority of applicants in Singapore come from these two source countries. One American assistant professor in the sciences elucidated this challenge,

> I mean post-docs, at least they have a little bit of a record. You can see their PhD thesis or they at least have already done some research. Whereas PhD students, it's kind of hard to judge if you don't know their home universities…Like, I mean, we get applicants from, you know, India and China. I just have no familiarity with those universities.

As a result, migrant academics from Europe and North America are more likely to rely on "luck" in finding PhD students and postdocs to run their research projects. As another American assistant professor in the social sciences explained,

> Some people have connections to big countries where they can try to ask people they know if there are any good students in this area to send them. But for me it's been kind of more by luck. Like someone just happens to have the same interest and applies. And uh, well there are not a lot of students.

Without personal ties to neighboring Asian nations, migrant academics in Singapore heavily depended on the support of administrators and other colleagues in pushing their recruitment efforts forward. Such support varied among departments, with some more successful than others. An assistant professor in the sciences explained,

> I think some departments have some policies to help the new faculty member to set up. So that means that the department will at least assign one or two students for the young labs. Yeah but [in my department], we don't have that. I need to find a way to get my students. So far, I don't have PhD student, only a master's student. Keep in mind, one of the important criteria for promotion is you must graduate a PhD student.

While interviewees in experimental fields did face more pressure to find academic labor, migrant academics from the social sciences and more theoretical STEM fields argued that having capable PhD students and postdocs still contributed greatly to their research productivity. As noted earlier, such academic labor alleviated the burdens of teaching, served as potential co-authors, and provided support for literature reviews, statistical analysis, or qualitative data-gathering. As an associate professor from the social sciences recalled,

> Actually, in my first two years, I didn't have students! I just had two single-author papers during the first year because I had no students to work with. And of course, there's still pressure – you need to get tenure so you need to do good research and you need to publish.
>
> Another associate professor from the sciences added,

> [Not having students] really killed me…At that time, I thought "Never mind, it's okay." But actually, it's not okay because when you apply [for tenure], nobody will care and they will all think that is not an excuse.

These migrant academics eventually found ways to recruit more students and develop their research projects. Both are now tenured within their institutions and settled in Singapore. Yet, they admitted that this was not the same case for many of their colleagues.

Conclusion

In making sense of the neoliberal university, education studies have highlighted how administrators, state agencies, and corporations create a system driven towards profiting from academic research, often at the expense of the institution's public mission (Findlow and Hayes 2016; Olssen and Peters 2005; Slaughter and Rhoades 2004). Based on the case of Singapore, this paper shows how these profit-making strategies also rely on universities' capacity to recruit the academic labor to drive knowledge production. While previous studies have highlighted how universities actively recruit foreign faculty in building their international reputation (see Paul and Long 2016), this paper demonstrates how the success of faculty is also highly dependent on the recruitment of postdocs and PhD students to fill their research and teaching needs. Outside traditional academic centers like the US, this task of finding the "right" labor to run academic production falls heavily on individual faculty members.

We argue that, while the emergence of aspiring academic centers like Singapore has spurred the rapid growth of universities beyond the West, there remains a disjuncture between these universities' desires for world-class status and the realities that academics face in their everyday work. In the case of Singapore, institutions provide the funding support and facilities to enhance their status in university rankings, yet they continue to lack the prestige accorded to more established universities in popular destination countries. Despite these challenges, Singapore-based academics, like many other counterparts in today's competitive research landscape, faced pressures to pursue high impact studies and produce as much from their research in a short period of time (Marginson and van der Wende 2007; Mok 2007). These struggles reflect broader pressures in a global higher education system where increasing emphasis on output-driven measures push university faculty to evaluate their personal value in terms of how much and how fast they can work (Ball 2015; Bonaccorsi, Daraio, and Geuna 2010; Deem 2001).

Our paper shows that because university administrators leave it to individual faculty to recruit their own students and postdocs, Singapore-based academics must devise their own strategies in overcoming the challenges of bringing academic labor into Singapore universities. In particular, we discuss how Asia-born migrant faculty with strong ties to their home countries were the most successful in utilizing social networks in encouraging co-ethnic and co-national students to come to Singapore and thus work around this limitation. These struggles also reveal underlying job insecurities, as our interviewees contemplate on whether their lack of productivity might lead to a denial of tenure and, subsequently, a need to look for work elsewhere.

In the end, there is lost opportunity in the rise of emerging knowledge hubs like Singapore. On the surface, one can interpret migrant academics' recruitment of co-ethnic students and postdocs as a potential for building stronger knowledge networks within the region and providing opportunity to individuals who may not have the resources to move towards academic centers such as the US and UK. Yet, such possibilities are relatively absent in our interviews. Rather, the use of co-ethnic ties to recruit from "home" is mainly driven by the anxiety of fulfilling universities' expectations and maintaining the kind of productivity recognized in today's neoliberal academic environment. This is especially the case for academics in fields that require more labor to carry out research projects and publications. In this sense, migrant academics' recruitment woes and their use of ethnic networks in addressing these challenges reveal the enduring hierarchies of a global higher education system, *despite* the growing presence of aspiring academic centers like Singapore. Such issues are often missing in the narratives that surround the global race for talent.

Acknowledgements

This work was supported by the National Research Foundation, Singapore, under Grant SRIE 023. Any opinions, findings, conclusions and/or recommendations expressed in this article are those of the authors and do not necessarily reflect the views of the Singapore National Research Foundation. The authors would like to acknowledge Gunjan Sondhi for her contributions in the development and implementation of qualitative interviews for this research project.

References

Ackers, Louise. 2008. Internationalisation, mobility and metrics: A new form of indirect discrimination? *Minerva* 46(4): 411–435.

Akerlind, Gerlese S. 2005. Postdoctoral researchers: Roles, functions and career prospects. *Higher Education Research & Development* 24: 21–40.

Altbach, Philip. 2006. Globalization and the university: Realities in an unequal world. In *International handbook of higher education*, ed. James Forest and Philip Altbach, 121–139. The Netherlands: Springer.

Austin, Ann E., David W. Chapman, Samar Farah, Elisabeth Wilson, and Natasha Ridge. 2014. Expatriate academic staff in the United Arab Emirates: The nature of the work experiences in higher education institutions. *Higher Education* 68: 541–557.

Ball, Stephen. 2015. Living the neo-liberal university. *European Journal of Education* 50: 258–262.

Barnett, George, Moosung Lee, Ke Jiang, and Han Woo Park. 2016. The flow of international students from a macro perspective: A network analysis. *Compare A: Journal of Comparative and International Education* 46: 533–559.

Bauder, Harald. 2015. The International Mobility of Academics: A Labour Market Perspective. *International Migration* 53(1): 83–96.

Bauder, Harald, Omar Lujan, and Charity-Ann Hannan. 2018. Internationally mobile academics: Hierarchies, Hegemony, and the Geo-scientific Imagination. *Geoforum* 89: 52–59.

Bonaccorsi, Andrea, Cinzia Daraio, and Aldo Geuna. 2010. Universities in the New Knowledge Landscape: Tensions, Challenges, Change – An Introduction. *Minerva* 48(1): 1–4.

Bozeman, Barry, and Jan Youtie. 2018. *The Strength in Numbers: The New Science of Team Science*. Princeton, NJ: Princeton University Press.

Burris, Val. 2004. The Academic Caste System: Prestige Hierarchies in PhD Exchange Networks. *American Sociological Review* 69(2): 239–265.

Cantwell, Brendan. 2011. Transnational Mobility and International Academic Employment: Gatekeeping in an Academic Competition Arena. *Minerva*

49(4): 425–445.

Cantwell, Brendan. 2015. Laboratory Management, Academic Production, and the Building Blocks of Academic Capitalism. *Higher Education* 70: 487–502.

Carrozza, Chiara, and Sara Minucci. 2014. Keep on movin'? Research mobility's meanings for Italian early-stage researchers. *Higher Education Policy* 27: 489–508.

Cerna, Lucie. 2016. *Immigration Policies and the Global Competition for Talent*. UK: Palgrave Macmillan UK.

Cerna, Lucie, and Meng-Hsuan Chou. 2014. Tilting the talent balance: From Europe to Asia—Germany and Singapore in comparison. In *Migration of skilled labour from Asia to Germany and Europe*, ed. A. Kreienbrink, 124–151. Nürnberg: Bundesamt für Migration und Flüchtlinge.

Collins, Francis L., Ravinder Sidhu, Nick Lewis, and Brenda S.A. Yeoh. 2014. Mobility and desire: International students and Asian regionalism in aspirational Singapore. *Discourse: Studies in the Cultural Politics of Education* 35: 661–676.

Deem, Rosemary. 2001. Globalisation, new managerialism, academic capitalism, and entrepreneurialism in universities: Is the local dimension still important? *Comparative Education* 37: 7–20.

Eckstein, Susan, and Giovanni Peri. 2018. Immigrant niches and immigrant networks in the US labor market. *RSF: The Russell Sage Foundation Journal of the Social Sciences* 4: 1–17.

Findlay, Allan. 2011. An assessment of supply and demand-side theorizations of international student mobility. *International Migration* 49: 162–190.

Findlow, Sally, and Aneta L. Hayes. 2016. Transnational academic capitalism in the Arab Gulf: Balancing global and local, and public and private, capitals. *British Journal of Sociology of Education* 37: 110–128.

Ge, Yun, and Kong Chong Ho. 2018. The cultivation of research labor in Pacific Asia with special reference to Singapore. *Asia Pacific Education Review* 19: 199–210.

Gerhards, Jurgen, Silke Hans, and Daniel Drewski. 2018. Global inequality in the academic system: Effects of national and university symbolic capital on international academic mobility. *Higher Education* 76: 669–685.

Gopinathan, S. 2007. Globalisation, the Singapore developmental state and education policy: A thesis revisited. *Globalisation, Societies and Education* 5: 53–70.

Gopinathan, S., and Michael H. Lee. 2011. Challenging and co-opting globalisation: Singapore's strategies in higher education. *Journal of Higher Education Policy and Management* 33: 287–299.

Jöns, Heike, and Michael Hoyler. 2013. Global geographies of higher education: The perspective of world university rankings. *Geoforum* 46: 45–49.

Kim, Terri. 2010. Transnational academic mobility, knowledge, and identity capital. *Discourse: Studies in Cultural Politics of Education* 31: 577–591.

Kim, Stephanie. 2016. Western Faculty 'Flight Risk' at a Korean University and the Complexities of Internationalisation in Asian Higher Education. *Comparative Education* 52(1): 78–90.

Kim, Terri. 2017. Academic mobility, transnational identity capital, and stratification under conditions of academic capitalism. *Higher Education* 73: 981–997.

King, Russell, and Parvati Raghuram. 2013. International student migration: Mapping the field and new research agendas. *Population, Space and Place* 19: 127–137.

Koh, Sin Yee, and I.Lin Sin. 2019. Academic and Teacher Expatriates: Mobilities, Positionalities, and Subjectivities. *Geography Compass* 14: 1–13.

Lee, Sing Kong, Chor Boon Goh, Birger Fredriksen, and Jee Peng Tan (eds.). 2008. *Toward a better future: Education and training for economic development in Singapore since 1965*. Washington, DC: The World Bank.

Li, Zhen, and John Lowe. 2016. Mobile student to mobile worker: The role of universities in the 'war for talent'. *British Journal of Sociology of Education* 37: 11–29.

Mahroum, Sami. 2000. Scientists and global spaces. *Technology in Society* 22: 513–523.

Marginson, Simon. 2013. The Impossibility of Capitalist Markets in Higher Education. *Journal of Education Policy* 28(3): 353–370.

Marginson, Simon, and Marijik van der Wende. 2007. To rank or to be ranked: The impact of global rankings in higher education. *Journal of Studies in International Education* 11: 306–329.

Mok, Ka Ho. 2007. Questing for internationalization of universities in Asia: Critical reflections. *Journal of Studies in International Education* 11(3–4): 433–454.

Müller, Ruth. 2014. Postdoctoral life scientists and supervision work in the contemporary university: A case study of changes in the cultural norms of science. *Minerva* 52(3): 329–349.

Musselin, Christine. 2004. Towards a European academic labour market? Some lessons drawn from empirical studies on academic mobility. *Higher Education* 48: 55–78.

Naidoo, Rajani. 2016. The competition fetish in higher education: Varieties, animators and consequences. *British Journal of Sociology of Education* 37(1): 1–10.

Ng, Pak Tee. 2013. The global war for talent: Responses and challenges in the Singapore higher education system. *Journal of Higher Education Policy and Management* 35: 280–292.

Olssen, Mark, and Michael A. Peters. 2005. Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy* 20: 313–345.

Ortiga, Yasmin Y., Meng-Hsuan Chou, Gunjan Sondhi, and Jue Wang. 2018. Academic ‘Centres’, Epistemic Differences and Brain Circulation. *International Migration* 56(5): 90–105.

Ortiga, Yasmin Y., Meng-Hsuan Chou, Gunjan Sondhi, and Jue Wang. 2019. Working Within the Aspiring Center: Professional Status and Mobilities Among Migrant Faculty in Singapore. *Higher Education Policy* 32(2): 149–166.

Paul, Anju Mary. 2018. Postdoctoral destination decisions: Advice from Asian-born, Western-trained bioscientists. In *High-Skilled Migration: Drivers and Policies,* ed. Mathias Czaika, 1-30. Oxford Scholarship Online.

Paul, Anju Mary, and Victoria Long. 2016. Human-Capital strategies to build world-class research universities in Asia: Impact on global flows. In *The transnational politics of higher education: Contesting the global/transforming the local,* eds. Meng-Hsuan Chou, I. Kamola, and T. Pietsch, 1–26. UK: Routledge.

Perkins, Richard, and Eric Neumayer. 2014. Geographies of Educational Mobilities: Exploring the Uneven Flows of International Students. *The Geographic Journal* 180(3): 246–259.

Rostan, Michele, and Flavio Antonio Ceravolo. 2015. The internationalisation of the academy: Convergence and divergence across disciplines. *European Review* 23: S38–S54.

Rostan, Michele, and Ester Ava Hohle. 2014. The international mobility of faculty. In *The internationalization of the academy: Changes, realities and prospects*, ed. Futao Huang, Martin Finkelstein, and Michele Rostan, 79–105. Heidelberg: Springer.

Sidhu, Ravinder, Kong Chong Ho, and Brenda S.A. Yeoh. 2011. Emerging education hubs: The case of Singapore. *Higher Education* 61: 23–40.

Sidhu, Ravinder, Brenda S.A. Yeoh, and Susan Chang. 2015. A situated analysis of global knowledge networks: Capital accumulation strategies of transnationally mobile scientists in Singapore. *Higher Education* 69(1): 79–101.

Sidhu, Ravinder, Kong Chong Ho, and Brenda S.A. Yeoh. 2019. *Student Mobilities and International Education in Asia: Emotional Geographies of Knowledge Spaces*. Switzerland: Springer Nature.

Slaughter, Sheila, and Gary Rhoades. 2004. *Academic capitalism and the new economy: Markets, states, and higher education*. Baltimore, MD: Johns Hopkins University Press.

Stack, Michelle L. 2013. The Times Higher Education Ranking Product: Visualising Excellence Through Media. *Globalisation, Societies and Education* 11(4): 560–582.

Tanyildiz, Zeynep E. 2015. The ethnic composition of science and engineering research laboratories in the United States. *International Migration* 53: 50–66.

Wang, Jue, Meng-Hsuan Chou, Xiang Li, Yasmin Y. Ortiga, and Gunjan Sondhi. 2017. *Singapore in the global talent race: Annual report*. Singapore: Nanyang Technological University.

Wang, Jue, Rosalie Hooi, Andrew Li, and Meng-Hsuan Chou. 2019. Collaboration patterns of mobile academics: The impact of international mobility. *Science and Public Policy* 46(3): 450–462.

Waters, Johanna. 2006. Geographies of cultural capital: Education, international migration and family strategies between Hong Kong and Canada. *Transactions of the Institute of British Geographers* 31: 179–192.

Waters, Johanna. 2009. Transnational geographies of academic distinction: The role of social capital in the recognition and evaluation of 'overseas' credentials. *Globalisation, Societies and Education* 7(2): 113–129.

---

[1] Institutional status and prestige also coincide with broader contextual factors such as a country's immigration policies and treatment of foreigners. Individuals seek destinations that offer higher chances of residency status, easier labor market access for their family members, better living conditions, or cultural similarities (Cerna and Chou 2014; Kou et al. 2015). While much has changed in recent years, academic jobs in the US and UK are generally seen to offer higher chances of permanent residency as compared to emerging knowledge hubs in Asia and the Middle East (Barnett et al. 2016).

[2] The Changing Academic Survey found that 76% of respondents were "embedded academics" or individuals who go through all major events in their life course within one country (Rostan and Hohle 2014: 81). Academics in this group are internationally mobile, but only spend short periods overseas as visiting scholars or researchers. In Singapore, a very small number of academics could be considered embedded academics. Aside from a large number of foreign academics, most Singaporean faculty also obtain their graduate degrees from universities in the US or UK (Wang, Hooi, Li and Chou 2019).

[3] Our sample reflects a more even balance between gender and discipline. A related report on Singapore-based academics (including local Singaporeans) indicates that faculty in Singapore's three main universities (NUS, NTU, and SMU) are 78% male and 22% female. A large proportion are in STEM fields (53%) while a smaller number are in the humanities and social sciences (21%) (Wang et al. 2017). This report did not have data on the different nationalities of migrant faculty in Singapore.