Marginson, S and Xu, X. (2022) "'The Ensemble of Diverse Music': Internationalization Strategies and Endogenous Agendas", In: S. Marginson and X. Xu (eds.) *Changing Higher Education in East Asia*. Bloomsbury. 1-30
DOI: http://doi.org/10.5040/9781350216273.ch-001

'The Ensemble of Diverse Music': Internationalization Strategies and Endogenous Agendas

Simon Marginson and Xin Xu

When the second Sino-Japanese War broke out in 1937, three prestigious universities in China, Peking University, Tsinghua University and Nankai University, moved from northern to southern China for protection, merging as the National Southwestern Associated University (西南联合大学, *xi nan lian he da xue*). The multi-university flourished during the war period and was home to many prominent academics. In an essay (Feng 1946/2020) for the commemorative stele of the university, Chinese philosopher Feng Youlan (冯友兰) wrote thus:

> 同无妨异，异不害同。五色交辉，相得益彰。八音合奏，终和且平。
>
> Commonalities do not obstruct differences;
>
> Differences do not harm commonalities.
>
> The matching of different colours leads to greater beauty;
>
> The ensemble of diverse music brings peace and harmony.

Introduction

If the twenty-first century is the Asian century, it is partly the East Asian century. By 'East Asia' we mean not just a geographical zone but a cultural and geopolitical zone, the part of the world shaped by Chinese (Sinic) civilization. After a long period of eclipse for much of the nineteenth and twentieth centuries, except in Japan, East Asia has become as globally important as the modern West, the zone of Western Europe and North America.

For the past four hundred years, the West has dominated the world, first through acquisitive colonization and trading power and then through the industrial revolution, military supremacy, technological edge and cultural institutions, including universities and science. In the past two hundred years, Western domination has been Anglo-American domination. In the past two decades, a blink of time by historical standards, the era of Western domination has passed. The East is not replacing the West. The United States remains strong. Rather, the East is rising alongside the West, and along with other countries and regions such as India, Indonesia and Southeast Asia, Iran, Brazil and Latin America. The economic transition is already apparent. Eventually the cultural transition will have equal impact. The more multipolar world now emerging is disrupting the old Western cultural hegemony (Pieterse 2018), which is a racialized English-speaking white supremacy (Shahjahan and Edwards 2021) that subordinated all other economies, polities and cultures, all other agency, as obstacles to overcome or resources to use. In the emerging world, the Sinic role will be immense.

What Is East Asia?

East Asia is not just China, although China is now the largest economy in the world if purchasing power parity (PPP) measures are used. 'East Asia' extends from the mainland of China to include the 'Greater China', the Hong Kong Special Administrative Region (SAR), the Macau Special Administrative Region (SAR) and Taiwan, which was carved out of the mainland by the retreating Kuomintang, with American support, when the Communist Party of China took power in 1949. More controversially, East Asia includes Korea, Japan, Vietnam and Mongolia. These nations are entirely independent of China in the political sense and distinct in cultural and linguistic terms. In a constantly changing world, each is evolving with its own mix of global and national elements. Japan was never territorially incorporated into China; Korea was never conquered for long; and China's province of Annam in North Vietnam threw off the imperial yoke in 939 CE. Mongolia housed nomad polities on the northern border that alternately conquered China and was conquered by it. However, there are deep common traditions (Holcombe 2011) that unite East Asian nations in the same manner that Western Europe has a common heritage. The other countries share with China the influence of classical Chinese language, Confucianism and Buddhism, which moved from India to China, to Korea and then Japan

during the high point of regional cultural sharing, the Sui and Tang dynasties in China (581–907 CE). Both Korea and Japan share China's comprehensive and centralizing form of state, which began as comprehensive in the statecraft of the Western Zhou (1046–771 BCE) and momentously took centralising shape in the Qin (221–207 BCE) and Han (202 BCE–220 CE) dynasties that have patterned all Sinic polities ever since.

More controversially still, the cultural zone of East Asia might be expanded to include the dynamic city-state of Singapore, with a majority Chinese population, Confucian educational tradition in the family and a Chinese style state; though many in Singapore emphasize that their nation is multicultural and multi-ethnic, and argue that Singapore's identity is defined more by its modern global role than by its cultural or regional lineage. *Changing Higher Education in East Asia* includes chapters on China (here referring to mainland China, as with all uses of 'China' that follow in the chapter), Hong Kong SAR, Taiwan, South Korea, Japan and Vietnam, though Macau SAR, Mongolia and Singapore are not covered here. Closed North Korea is not included either, because there are no data on its higher education.

The rise of East Asia is apparent not only in political economy but in higher education, research and science, and here deeply rooted cultural commonalities are apparent. All countries except Mongolia share the Confucian norm of self-cultivation through learning, cognitive and ethical formation in the lifelong work of the self on the self, first in the family from a very early age and then in education (Li 2012). The key moment is the formation in every child, typically at six or seven years, of *lizhi*, the reflexive commitment or 'will' to learn (163). In higher education, the East Asian systems are moving to, and in South Korea and Taiwan have surpassed, the levels of social participation in Western countries. China has overtaken the United States to become the world's largest producer of new published scientific knowledge, with Japan being the fourth largest and South Korea the ninth largest. The number of 'world-class universities' (WCUs) in the region is increasing each year, and in research in the physical sciences and related fields (though not in other fields), the top universities in China and Singapore now generate as much high citation science as do the top US universities. The system-building achievements of East Asian higher education and science – first in Japan in the nineteenth century and again after the Second World War, and then in South Korea, Taiwan, Singapore from the 1980s and China from the 1990s – are quite extraordinary. East Asian nations share a mode of state-led, centrally focused, accelerated development, grounded in high investment and performance targets, and resting on an ethic

of self-improvement that is shared by individuals and institutions. This again suggests a common culture.

The building of these dynamic higher education systems, and the close parallels from case to case, especially in temporality, dramatically confirm that modern China, Taiwan, the Koreas and even Singapore continue to be partly patterned by the Zhou-Qin-Han inheritance of state-led political culture and the traditional Sinic capacity of populations to work collectively for ends shared by local communities and the state (Marginson and Yang 2021). These same capacities for effective state policy, combined with shared social responsibility from below, have been apparent during the Covid-19 pandemic, in which the death tolls in China, Taiwan, South Korea and Singapore have been relatively very low, and casualties in Japan and Vietnam have also been small in comparison to Western countries and the global South (Marginson 2020). During the pandemic, East Asian polities and societies have given priority to human well-being, grounded in Confucian humanism (*ren*), and demonstrated commitment to the public realm and community, and willingness to surrender personal interests for the larger collective good. As a result, the pandemic has scarred East Asian countries less than other countries. It seems certain that one outcome of the pandemic period will be to elevate these countries in global terms, in economy, politics, society and culture. The pandemic might also lead to enhanced regional mobility in higher education, as Chapter 12 suggests. With journeying to the West more hazardous and constrained, countries, universities, faculties, and students in East Asia may travel more within the region itself.

At the same time as endogenous cultural influences have been playing out, the East Asian systems have been strongly influenced by Western and especially US templates in building higher education and research. In every higher education system in the region, Western norms and practices are in tension with both traditional and modern endogenous thinking. But the relation between Westernization and endogenization is not zero sum; it is more complicated. In higher education, internationalization is selective and driven by national 'catch-up' agendas, not imposed from outside in a neo-imperial fashion as it once was by the Western powers, and endogenous cultural contents are becoming more important. Adapting the point made by Jacques (2012) about China, as East Asian countries become stronger they become more distinctively East Asian. The relationship, tension and synergies between isomorphic internationalization and national-cultural agendas and contents is a significant theme through the chapters of *Changing Higher Education in East Asia*.

Deep cultural roots are one thing, while contemporary agreement is another. Although East Asian countries face a shared 'rival' – the West – the struggle against an external rival does not lead to an internally integrated region in the political sense. East Asia's cultural commonalities have not led to the formation of a consensual regional identity and machinery of intergovernmental cooperation, with commitment to growing integration over time, in the manner of the European Union – East Asian nations are no closer to political regionalization than was Europe before the Second World War. There is a successful regional grouping in Asia; however, it is not in East Asia but in Southeast Asia. The Association of Southeast Asian Nations (ASEAN) is a free trade zone of ten nations that collaborate effectively in education and many other areas. ASEAN includes Vietnam and Singapore but not the nations and systems of Northeast Asia. China, Japan and South Korea attend some ASEAN meetings and by this backdoor mechanism deal with each other diplomatically. Mostly, these three nations are politically estranged, especially at the public level, while the smaller countries and SARs in East Asia are often on the defensive, minnows that navigate a changing course between the bigger fish. Each country in East Asia typically retreats to its national container and emphasizes nationalism, which is demonstrated variously not only by de-Westernization, but also by the assertion of de-Chinalization and de-Japanization within the region.

The historical wounds inflicted by Japan's aggression in the first half of the twentieth century have not healed, and both South Korea and Japan are wary of the growing strength of the much larger China. During China's long imperial period, Korea paid tribute to China while Japan refused to do so. Given their own successful modernization in the contemporary era, neither country wants to adopt a subordinate relationship now, but it seems difficult to devise a relationship of equals, and China is not impelled to do so. Relations are worsened by the positioning of Korea and Japan as US allies in American strategies designed to block China's rise and confine it through military means, with a half circle of US bases and deployments around its Pacific shore. Vietnam and China have a separate 2,200-year history of conflict. Hong Kong SAR returned to China in 1997 but its political culture has been shaped by the years in which it was an outlier of the West as a British colony, and there are tensions between many people in the SAR and the mainland polity led by the Communist Party of China. If it was a united region, East Asia would be a great powerhouse, but it is bedevilled by these questions of history, decoloniality, equality, respect, balance and primacy as well as the geopolitics of the America/China standoff. Media are often xenophobic, and routine cooperation at official levels is fraught.

East Asian higher education is not – and never has been – a unity itself. Though East Asia is a region in the cultural sense, it is not a region in other ways, especially given the internal political tensions. The region lacks top-level structure of coordination for interregional higher education cooperation. None of the handful of university-initiated or government-initiated programmes, such as Association of East Asian Research Universities (AEARU) and Collective Action for the Mobility Program of University Students in Asia (CAMPUS Asia), is on anything like the scale of the Erasmus and Horizon programmes in European Union. China's Belt and Road Initiative and the subsequent University Alliance of the Silk Road (UASR) includes a small number of universities in Hong Kong SAR, South Korea and Japan, but it primarily extends to partners outside East Asia in Eurasia, Africa and Latin America (UASR 2021). The regionalization of East Asian higher education manifests not in system-wide cooperation, but in the shared cultural base (despite resistance to this idea, when systems are determined to assert national identity) and, often more promisingly, in the bottom-up cooperation between universities and between individual scholars, scientists and students who work across the borders.

In this introductory chapter, we provide a brief summary of economy, demography, society and higher education and science in East Asia, and we trace the building of mass higher education systems as well as the concurrent building of science systems in the region. We also explore East Asian higher education between the antinomies of Western modernization and East Asian identity and strategy. Finally, we foreground the chapters in the book.

Diversity and Commonality

Size, Economy, Education

Table 1.1 sets down features of the economy, demography, society and education in East Asia. At first sight the differences stand out, particularly in size, language and wealth. In population, economy and surface area, mainland China towers over the region. In 2019, its GDP of USD23.5 trillion constituted 17.2 per cent of world GDP, with East Asia as a whole constituting one-quarter of world GDP. In 2019, China's per capita income was just below the world average, but the processes of modernization and the movement from the countryside to the cities are still unfolding and GDP per capita is highly uneven by region, with

Table 1.1 East Asian Nations and Education Systems, Selected Indicators, 2019 or Nearest Year

Country/Region[a]	Main use language	Population	Surface area	Total GDP PPP	GDP PPP per capita	Gross tertiary enrolment ratio	
		2019 millions	2019 sq. km. ('000s)	2019 USD billion	2019 USD	1990 %	2019 %
China (mainland)	Mandarin	1,397.7	9,600	23,488	16,804	3	54
Japan	Japanese	126.3	378	5,504	43,594	n.a.	n.a.
Vietnam	Vietnamese	96.5	331	810	8,397	3	29
South Korea	Korean	51.7	100	2,276	44,011	37	96
Taiwan	Mandarin	23.6	36	1,143	49,800	n.a.	n.a.
Hong Kong SAR	Cantonese	7.5	1.0	469	62,496	18	81
Singapore	English	5.7	0.7	580	101,649	n.a.	89
Mongolia	Mongol	3.2	1,564	42	12,862	18	66
Macau SAR	Cantonese	0.6	0.03	83	129,451	33	100
World	–	7,673.5	134,543	136,678	17,201	14	39

[a] See text for discussion of which countries and regions are included in 'East Asia'. n.a. = data not available. GDP = gross domestic product. PPP = purchasing power parity. US = United States. SAR = special administrative region. US dollar amounts are current 2019 prices. Gross tertiary enrolment data for Hong Kong SAR is for the year 1992 not 1990; for Singapore and Mongolia, it is 2018 not 2019.

Source: Authors, original data from World Bank (2021); UNESCO (2021); United States Central Intelligence Agency (CIA) for Taiwan data.

the urbanized Eastern parts of the country much wealthier than the Western provinces.

Leaving aside thinly populated Mongolia, East Asia divides into (1) China, a region in itself, (2) medium-sized Japan, South Korea and Vietnam, with the last much poorer than the others; and (3) the small densely populated high capitalist enclaves of Taiwan, the largest of these, Hong Kong SAR, Macau SAR and Singapore. Japan, South Korea and the countries/regions in group 3 now have per capita incomes akin to those of Western Europe. On this measure, Singapore has become significantly wealthier than even Switzerland.

In the past four decades, the whole region, with the exception of Mongolia, has been energized and transformed by accelerated economic development led by state policies. Japan became the world's second largest economy by the 1980s; however, its economy entered a long period of stagnation in the early 1990s. China has experienced high annual economic growth since the mid-1980s, and the other countries in the region have also seen rapid growth by world standards, albeit less consistently than in China. Economic transformation has underpinned the advance of participation in higher education. Table 1.1 compares the gross tertiary enrolment ratio in 1990 with that in 2019. In China the ratio advanced from 3 per cent to 54 per cent, and in South Korea it was close to 100 per cent in 2019.

Table 1.1 also indicates the diverse languages in use. There are two primary groupings: the Chinese languages Mandarin, the national language, and Cantonese, and the languages Mongol, Korean and Japanese, which are not mutually intelligible but have common roots in the Altaic zone in central Asia. Mongol is spoken in Eastern Mongolia with various Chinese languages used elsewhere in the country. Vietnamese is the largest Austroasiatic language. It has been significantly influenced by successive borrowings from Chinese and like Chinese, but unlike the Altaic derivatives, it uses tonal forms in speech. However, while the region is linguistically diverse, China, the SARs and Taiwan, South Korea, Japan and Vietnam have for long shared written Chinese. The written forms of Korean Hanja and Japanese Kanji derive from classical Chinese. This is one key to the underlying cultural similarities.

As noted, another important cultural similarity is the common commitment to Confucian self-cultivation (Tu 1985), manifest in the priority given to education by families and the state. All countries in the region that are tested perform exceptionally well in the Organisation for Economic Cooperation and Development's (OECD) periodic comparison of learning achievement at age fifteen, the Programme for International Student Assessment (PISA),

Table 1.2 Twelve Leading Countries/Regions in Mathematics, Science and Reading According to the 2018 OECD PISA Survey

Mathematics		**Science**		**Reading**	
China (four provinces)	591	China (four provinces)	590	China (four provinces)	555
Singapore	569	Singapore	551	Singapore	549
Macau SAR	558	Macau SAR	544	Macau SAR	525
Hong Kong SAR	551	Estonia	530	Hong Kong SAR	524
Taiwan	531	Japan	529	Estonia	523
Japan	527	Finland	522	Canada	520
South Korea	526	South Korea	519	Finland	520
Estonia	523	Canada	518	Ireland	518
Netherlands	519	Hong Kong SAR	517	South Korea	514
Poland	516	Taiwan	516	Poland	512
Switzerland	519	Poland	511	Sweden	506
Canada	512	New Zealand	508	New Zealand	506

Note: The four Chinese provinces are Beijing, Shanghai, Jiangsu and Zhejiang.

Source: Authors, original data from OECD (2019: 17–18).

as Table 1.2 shows. East Asian schooling systems occupy the first seven places in the PISA mathematics comparison and seven of the first ten places in science. They are slightly less strong as a group in reading, but all are in the top seventeen out of the seventy-eight education systems in that comparison. The performance of the four Chinese provinces can be noted. While these are in affluent parts of the country, and scores in poorer parts of China are lower, a reasonable comparison to city-provinces such as Beijing and Shanghai is the wealthy urbanized communities of Singapore or Hong Kong SAR which are richer than the Chinese cities. As Table 1.2 shows, the Chinese provinces are way ahead of even Singapore and Hong Kong in mathematics and science, and also first in the world in reading (OECD 2019: 17–18). The OECD notes:

> Around one in six 15-year-old students in Beijing, Shanghai, Jiangsu and Zhejiang (China) (16.5%), and about one in seven students in Singapore (13.8%), scored at Level 6 in mathematics, the highest level of proficiency that PISA describes. These students are capable of advanced mathematical thinking and reasoning. On average across OECD countries, only 2.4% of students scored at this level. (OECD 2019: 15)

This concentration of well-formed talent is highly significant, but equally important is the fact that the proportion of the age group in the Chinese provinces that achieve below level 2 in all three disciplines is exceptionally low (1.1 per cent). This compares with the OECD average of 13.4 per cent. The low achiever group is also relatively small (2.3 to 7.5 per cent) in the other East Asian systems (OECD 2019: 17–18). This is much the strongest region in the world in terms of student learning achievement, and it is a levelling up achievement in which almost no child is left behind. Other countries talk about it; East Asian countries do it. It is an exceptional social-cultural platform for fostering the capability of populations and the development of higher education.

A Common Dynamic of Educational Development?

As the chapters in this book demonstrate, East Asian state strategies and policies in higher education are nationally nuanced. The political systems and cultures vary. The economic and social challenges are different. The inherited resources for education, and the capacity of states and families to invest in education, are uneven. Nevertheless, at the outset of this book, we want to expand on the dynamism common to all of the East Asian education systems where the national wealth approaches or exceeds world average GDP per capita. This common dynamic rests on two elements derived from the heritage of Chinese civilization. First, as noted, there is the classical Chinese state, which assumes a comprehensive responsibility for order, stability and prosperity, and intervenes at will. It is not a limited liberal state of the Anglo-American kind (Marginson and Yang 2021). Compared to most states outside East Asia, the East Asian state operates at a relatively high level of competence, especially in matters of designated national priority, which in the past thirty years (earlier in Japan) have included higher education and science. Second, there is the Confucian educational family.

Ten years ago, one of us published a paper arguing that the Sinic education systems can be understood in terms of a distinctive 'Confucian model' of higher education development (Marginson 2011). Later the term was amended to 'post-Confucian model' to acknowledge the impact of Western modernization in East Asia, and the resulting hybridity, but the argument about the distinctive features of the model was unchanged (Marginson 2013). In summary, the post-Confucian model of higher education system is embodied by the following:

- Focused state policies with a long-term horizon, supported by monitoring of measured performance, animated by the drive to lift educational

participation, scientific output and the leading universities to Western (especially US) levels;

- Deep and universal Confucian aspiration for education and the embedded family commitment to education, including a willingness to share the national cost through both normal schooling and shadow schooling, releasing additional state resources for institution-building, research and quality improvement;
- A shared perception concerning higher education's contribution to both individual cultivation and the public good; hence the common focus on quality education, respect for teachers and commitment to continuously developing and improving education among government, university, faculty, families and students;
- Advanced levels of national investment, continually increasing as a proportion of GDP, especially in China and Singapore. National investment is crucial to the post-Confucian model. In the two systems where the growth of investment has stopped, Japan and Taiwan, educational development has lost most of its dynamism, and until now Vietnam and Mongolia have been too poor to pursue advanced investment;
- The growth of educational infrastructure in both the public and private sectors, enabling the rapid expansion of participation in a range of institutions, with the state carrying only part of the cost of infrastructure but regulating private sector quality as a public good. This includes private sector policy in Japan and South Korea, where those institutions house the majority of students;
- The focused development of a layer of leading research-intensive universities or WCUs, a strategy vigorously pursued by all East Asian systems;
- The mediation of participation and access to institutions of hierarchical value on the basis of social consensus by the universal examination systems inherited from the imperial tradition. This instrument allows participation to be expanded to any level without changing systemic structures or destabilizing system norms;
- Systematic strategies of internationalization to drive improvement (e.g. Wang, Wang and Liu 2011), including partnership building, benchmarking of disciplines and institutions, selective adaptation of systemic and organizational templates, offshore doctoral study and researcher experience, and inward people mobility.

Among scholars there has been some push-back against the notion of a post-Confucian model, on the grounds of differences of national identity between

East Asian countries, or on the grounds that national development should be understood in universal terms, governed by a single political economy, rather than varying on the basis of historical-cultural context. However, there has been no critique, empirical or philosophical, of the identified East Asian commonalities in education and in the related political culture, nor of the argument that these commonalities derive from the potent Sinic heritage of state and family. Western modernization has not displaced Sinic tradition; it has combined with it. The countries in the Chinese civilizational zone pursue modernization paths that are different from those of North America or Europe, and in higher education and research (though not in all fields of social development), this path seems to be broadly similar across the whole region.

Governance, Growth and Talent Pools

In joining in the worldwide tendency towards adoption of neoliberal system design and neo-managerial frameworks of university administration, East Asian governments stepped back to steer higher education from the middle distance. The partial devolution is apparent in different forms, such as rendering local governments and universities with more autonomy, or allowing more room for private providers of higher education. In Macau SAR, the proportion of the enrolment in private tertiary education rose from 34.6 to 55.2 per cent between 2000 and 2019; in Hong Kong SAR, it grew from 3.3 to 17.7 per cent from 2003 to 2019. Private sectors dominate South Korean and Japanese higher education, with 70–80 per cent gross enrolment rates in private higher education institutions (UNESCO 2021).

Nevertheless, devolution and diversification has not been pursued to the point of losing control, and central governments in East Asia orchestrate higher education more closely than Western states, often investing more vigorously as well. Governmental expenditure on education expanded in all East Asian systems in the past three decades (UNESCO 2021), and in China it remains the main funding source (Han and Xu 2019). As noted, post-Confucian system strategies are characterized by long-term vision, growing resource inputs and focus on leading research-intensive universities. Centrally initiated schemes that set out to develop WCUs often become the most influential schemes in each system: the Double First-Class Programme and previous Projects 985 and 211 in China, the Top Global University Project in Japan, Brain Korea 21 Project in South Korea,

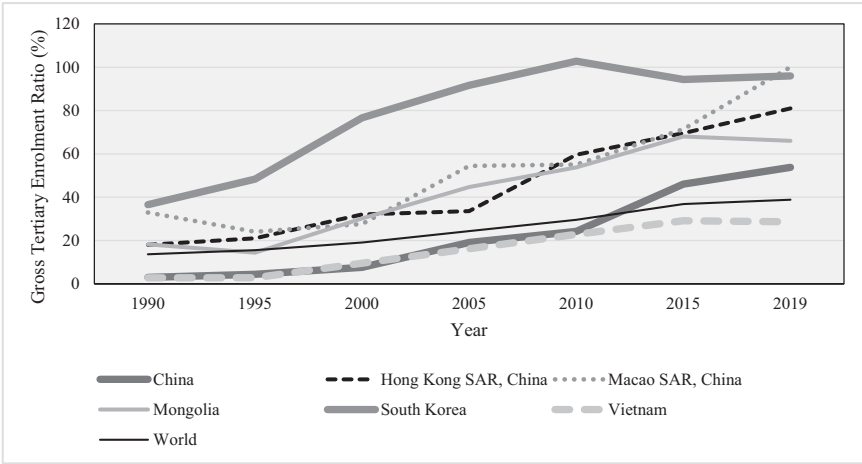

Figure 1.1 Gross Tertiary Enrolment Ratio in East Asian Education Systems, 1990–2019.
Note: Data not available for Japan, Taiwan, Singapore. Figure based on data in year 1990, 1995, 2000, 2005, 2010, 2015 and 2019. Data for South Korea and Mongolia in 2018 not 2019; for Hong Kong SAR, 1992 not 1990, 1994 not 1995, 2003 not 2000; for Macau SAR, 1994 not 1995.
Source: Authors, original data from World Bank (2021).

Higher Education Sprout Project in Taiwan, and Project 911 and Project 322 in Vietnam. Hong Kong SAR and Macau SAR are included in the Greater Bay Area development plan led by mainland China. In Mongolia, parallel top-down schemes have appeared in broader-scale policies like Mongolia Sustainable Development Vision 2030.

Higher education systems in East Asia have experienced explosive growth (shown in Table 1.1 and Figure 1.1). In 1990, all systems except for China and Vietnam had a gross enrolment ratio in tertiary education above the world's overall level. With continuous growth over the past thirty years, all except Vietnam have now achieved a gross enrolment ratio well above the world's level of 39 per cent and above Martin Trow's (1973) 50 per cent threshold for universal education. Note that despite a comparatively low enrolment rate in Vietnam, the ratio increased around ten-fold in the period. The features of the post-Confucian model noted in the previous section have enabled a relatively orderly massification of higher education. Universal education poses questions about quality assurance, thus shifting the governance's focus to accountability and efficiency (Mok 2003). Other major impacts of massification have been the increasingly competitive graduate job market, devalued credentials and intensified equity issues within widening participation (Tight 2019).

Table 1.3 Enrolment in Doctoral Education in Selected East Asian Systems

Systems	2010	2014	2018	Growth from 2010 to 2018 (%)
China	290,853	306,651	380,444	31
Hong Kong SAR	7,953	8,426	10,286	29
Macau SAR	583	1,013	2,245	285
Japan	73,734	74,093	80,767	10
Mongolia	2,190	3,407	4,295	96
South Korea	53,533	69,975	74,750	40
Vietnam	4,683	8,870	14,686	214
World	2,607,763	2,778,267	3,109,787	19

Note: Data not available for Taiwan and incomplete for Singapore. Data for China is for the year 2013 not 2010; for Vietnam, the year is 2011 not 2010.

Source: Authors, original data from UNESCO (2021).

Massification has also been associated with the snowballing expansion of postgraduate education – as the job market becomes more competitive, a postgraduate qualification becomes both an alternative pathway and additional credential. The transition to the knowledge society – where high-level skills, often associated with a doctorate, bear more significance – also facilitates the growth of doctoral education (Shin, Kehm and Jones 2018). Table 1.3 shows the growth of doctoral education in East Asia. All systems except for Japan experienced a growth rate higher than the world level, with Macau SAR and Vietnam experiencing more than 200 per cent growth rates. (Note Japan already had a large doctoral education base in 2010, which has been sustained with slow growth.) As of 2018, China hosts the largest number of doctoral students in the world, followed by the United States, Germany, India, Iran, Brazil, UK, Turkey, Russia, Spain, Japan and South Korea (UNESCO 2021).

Doctoral education concentrates in science and engineering disciplines (Shin, Kehm and Jones 2018), and it has generated a larger pool of skilful qualified scientific researchers and labourers. South Korea, Japan and Singapore are among the countries with the highest rate of researchers per 1000 total employment – nineteen in South Korea in 2018, fourteen in Japan in 2018, thirteen in Singapore in 2017; across the world, the recent highest ratio was twenty-two in Denmark in 2017 (UNESCO 2021). Domestic doctoral researchers contribute to scientific publications, as in China when doctoral students needed certain number of Science Citation Index (SCI) publications to graduate (Li 2016). In addition to locally trained doctoral researchers, East Asian systems share talent pipelines in

the form of educated returnees and diasporas from the West. The most popular overseas destinations for East Asian students are countries in the West (Table 1.6 below). As East Asian economies, higher education and research advance, an increasing number of outbound students return to East Asia upon graduation or soon after. Diaspora researchers staying in the West also maintain positive links with their home country for scientific collaborations (e.g. Welch and Hao 2013). Furthermore, an increasing number of international students and academics are journeying to the East for education and career opportunities. This traffic was previously concentrated in Hong Kong SAR and Singapore, but China has become a growing magnet. All of these people flows converge to form an ever-expanding talent pool for scientific research in East Asia.

Research and Science

Prior to the mid-1980s, East Asia made a negligible contribution to published world science, except in Japan. Going by present trends, by 2030 East Asia's output of science papers in the main bibliometric collections, Web of Science (WoS) and Scopus, will exceed the combined output of North America and Europe. While China's size dominates the picture, Japan remains a strong science system despite lack of growth while Singapore, especially, and South Korea have impressive achievements in both academic and industry science. In terms of the proportion of national GDP spent on R&D, South Korea is second highest in the world, behind only Israel (OECD 2021).

Bibliometric collections do not provide a full picture of the knowledge generated in universities and research institutes in East Asia. Few non-English language papers are included – which particularly affects the social sciences, where many problems investigated are local or national not global, and the humanities, where the main conversation is in national languages. Nevertheless, the trends in global science indicate the dynamism of the region.

Funding and Output in Research

In the year 2000, East, Southeast and South Asia together comprised 25.3 per cent of worldwide R&D investment. By 2017, that proportion was 41.7 per cent, mostly in East Asia, while the US share fell from 37.2 to 25.5 per cent (NSB 2020: figure 14). Most published science is from universities. A crucial funding indicator is R&D investment in research in higher education. Between

2000 and 2019, this metric rose from USD3.4 to USD41.8 billion in China, in constant 2015 prices. Resources multiplied by 12.25 in real terms in less than a generation. In Japan, South Korea, Singapore and Taiwan together, funding for university science rose from USD24.3 to USD34.8 billion. There was little change in Japan, but funding rose from USD2.5 to USD8.3 billion in South Korea, multiplying by 3.27 times. In Singapore, between 2000 and 2018, it rose from USD1.0 to USD3.6 billion, 3.80 times. This compares with the doubling of funding in the United States and near doubling in the EU-15 over the period (OECD 2021).

The trajectory in published science has followed funding. Between 2000 and 2018, the number papers multiplied by 9.96 in China and by 4.17 in South Korea, with a more modest growth in Singapore (2.39) and Taiwan (2.12). China's share of published global science rose from 5.0 to 20.7 per cent over this time period, though Japan's share fell from 9.1 to 3.9 per cent (NSB 2020: figure 5A-3). In Japan, both funding and outputs showed almost no change, a suggestive correlation, while science grew markedly across the world as a whole.

However, the role of East Asia in science is uneven by discipline. Figure 1.2 indicates not one global science system but several, with the weight of China and East Asia varying markedly between them. In 2018, China was much the largest producer in physical sciences STEM (science, technology, engineering and mathematics), having grown its world share of Scopus papers in this cluster from 8.5 to 27.7 per cent since 2000, much more than each of the United States and Europe. The combined East Asia share of physical sciences STEM papers was over 40 per cent. China's share of world science in biological, biomedical and health disciplines grew from 2.3 to 13.3 per cent over 2000–18 period. The priority given to biomedical sciences, health-related research and adjunct life science was higher in both the United States – where these disciplines constituted 48.0 per cent of all 2018 US papers – and EU (39.1 per cent) than in China (23.0 per cent). China had 22.9 per cent of papers in planetary science, but a minor presence in Scopus social sciences. Because many papers in social science and psychology are in national languages (Figure 1.2), and English language papers often focus on local or nation-bound English-speaking country issues, this cluster does not really constitute a global field of knowledge. China had 613 papers in Scopus in social science in 2000, 1.1 per cent of the world total, and 4.4 per cent in 2018 (NSB 2020: table S5-A). East Asia outside China was stronger in producing social science papers in the English language. Liu et al. (2015) examine China's publications in the WoS Social Science Citation Index (SSCI) for 1978–2013 period. Hong Kong SAR, where universities have

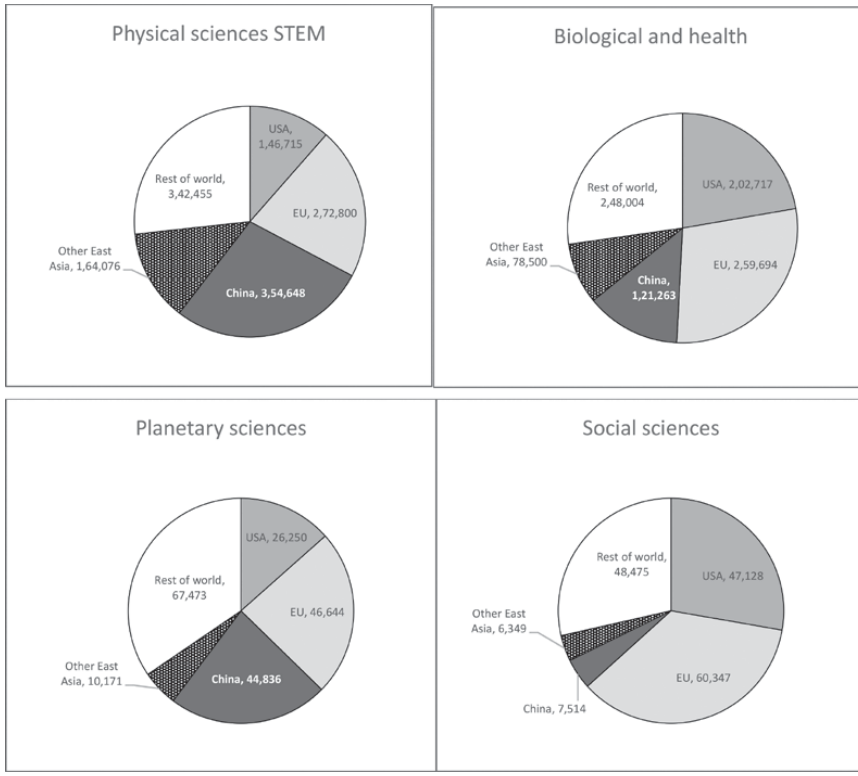

Figure 1.2 Number of Papers in Scopus in (1) Physical Sciences STEM, (2) Biological and Health Sciences, (3) Planetary Sciences and (4) Social Sciences and Psychology from the United States, EU, China and Other East Asian Systems, 2018.

Note: Physical sciences STEM (science, technology, engineering and mathematics) include astronomy and astrophysics, chemistry, computer and information sciences, engineering, materials science, mathematics and statistics, and physics. Biological and health sciences include biological and biomedical sciences as well as health sciences. Planetary sciences include agriculture, geosciences, atmospheric and ocean science as well as natural resources and conservation. Social sciences include social sciences and psychology. Most social science and humanities, and most non-English papers, are excluded from Scopus.

Other East Asia systems: Japan, Singapore, South Korea and Taiwan; Vietnam is excluded; Hong Kong and Macau SARs included in China.

Source: Authors, from NSB (2020: table S5A), originally sourced from Scopus.

an Anglo-American discipline profile, published almost twice as many social science papers in WoS as the Beijing region (559).

In China, the skew to physical sciences STEM is partly explained by the funding priority for projects in construction, communications, energy, transport

and other developmental domains, including engineering and computer science. Between 2000 and 2018, there was rapid growth in computer science (multiple of 17.57), engineering (9.77), materials science (8.78) and chemistry (7.51). For the year 2018, China had a long lead over the world's other countries in the number of published papers in chemistry, materials and engineering and was first also in computer science and more narrowly, physics. Papers in engineering rose from 13,777 in 2000 to 134,542 in 2018, in chemistry from 6,762 to 50,753 and in computing from 3981 to 69,932. The US share of physical sciences STEM papers fell from 23.7 to 11.5 per cent in 2000–18 (NSB 2020: tables S5A-2 to S5A-16).

High Citation Science and WCUs

However, the proportion of US papers located in the top 1 per cent of the field in 2016 (1.88 per cent) was higher than in China (1.12 per cent). Using this indicator, China outperformed the United States only in mathematics, though it was moving towards US citation performance in a second discipline, computer science. The two research universities in Singapore had an exceptionally high 2.97 per cent of papers in the top 1 per cent. The proportion in South Korea was 1.02 per cent, in Taiwan 1.00 per cent and in Japan 0.88 per cent (NSB 2020: table S5A-35).

When comparing science citation performance between countries, China does better in its leading WCUs than in national science as a whole. Table 1.4 lists the leading East Asian universities on the basis of publications in 2016–19 inclusive in the top 5 per cent of their field. China overwhelmingly dominates the list, with Singapore's universities also doing very well. Both national science systems exhibit remarkable rates of annual increase in the number of high citation papers in the last column, when compared with the other countries in the table. Table 1.4 also includes selected comparators from North America and Europe. In 2015–18, Tsinghua University was sixth in the world in top 5 per cent papers, its 1451 exceeded only by Harvard, Stanford and MIT (Massachusetts Institute of Technology) in the United States, Toronto in Canada as well as Oxford in the UK. Most of these universities, especially Harvard and Toronto, were sustained by paper volume in biomedicine and related fields. However, the top Chinese universities were weaker than the Euro-American comparators in the proportion of all their papers that were in the top 5 per cent. Using this indicator, Hunan University (10.1 per cent) was the strongest in China (Leiden University 2020).

Table 1.4 Papers in the Top 5 Per Cent of Their Research Field by Citation Rate, Selected Asian Universities, 2006–9 to 2016–19

University	System	Top 5% papers 2016–19	Top 5% papers 2006–9	Annual growth top 5% papers over ten years (%)	Proportion of papers top 5% 2016–19 (%)	Number of international papers in 2016–19
Universities producing 600 or more papers in top 5% of their disciplinary field in 2015–18						
Tsinghua U	China	1,574	402	14.62	7.4	15,137
Zhejiang U	China	1,427	316	16.27	5.5	13,588
Shanghai Jiao Tong U	China	1,211	296	15.13	4.6	14,311
National U Singapore	Singapore	1,072	521	7.48	8.3	19,575
Huazhong U S&T	China	1,057	117	24.62	5.6	8,391
Peking U	China	1,051	313	12.88	5.7	14,041
Nanyang Technological U	Singapore	928	278	12.81	9.2	14,769
Harbin IT	China	927	171	18.42	5.7	6,811
Central South U	China	899	86	26.45	5.3	6,989
Xi'an Jiaotong U	China	849	109	22.79	4.9	8,407
Sun Yat-sen U	China	819	153	18.27	4.8	9,975
U Science and Technology	China	780	246	12.23	6.6	7,903
U Chinese Academy of Sci	China	775	6	62.60	5.7	16,400
Sichuan U	China	760	124	19.88	4.1	6,405
Wuhan U	China	622	114	18.49	5.3	6,515
Fudan U	China	737	222	12.75	4.4	9,261
Hunan U	China	709	69	26.23	10.1	3,567
South China U Technology	China	700	84	23.62	6.2	4,565
Nanjing U	China	694	185	14.13	5.7	8,022

(*Continued*)

Table 1.4 Continued

University	System	Top 5% papers 2016–19	Top 5% papers 2006–9	Annual growth top 5% papers over ten years (%)	Proportion of papers top 5% 2016–19 (%)	Number of international papers in 2016–19
Tianjin U	China	679	93	21.99	5.1	5,832
U Tokyo	Japan	653	676	-0.35	4.4	14,333
Beihang U	China	607	42	30.62	5.8	5,473
Shandong U	China	605	132	16.44	3.8	6,727
Jilin U	China	605	115	18.06	3.4	5,631
East Asian universities leading their systems with less than 600 top 5% papers in 2015–18						
Seoul National U	South Korea	588	339	5.66	3.4	10,116
U Hong Kong	Hong Kong SAR	511	314	4.99	6.6	7,773
National Taiwan U	Taiwan	293	280	0.45	3.3	7,375
Selected comparators from outside East Asia and Singapore						
Harvard U	USA	4,230	3,626	1.52	12.4	44,071
U Oxford	UK	1,696	1.045	4.96	10.5	28,903
U Toronto	Canada	1,691	1,221	3.31	7.2	27,583
MIT	USA	1,586	1,210	2.74	15.1	17,129
U Cambridge	UK	1,117	1,440	2.57	10.2	24,954
ETH Zurich	Switzerland	640	940	3.92	9.9	16,599
U Melbourne	Australia	546	941	5.59	6.9	19,143
U Utrecht	Netherlands	577	758	2.77	8.0	15,430

Note: Data does not include Israel. All universities with 600 papers published in 2016–19 and in the top 5 per cent of their field on the basis of citations, plus selected East Asian systems not otherwise included. International denotes proportion of all papers (not just top 5%) that were co-authored outside the country.

Source: Authors, from Leiden University (2020).

China's WCUs do exceptionally well in the STEM disciplines. In the number of top 5 per cent 2016–19 papers in the domain of mathematics and computing, Tsinghua was the world leader and the first six universities on the list were all from China. In the list for physical sciences and engineering, Tsinghua was again number one, well ahead of MIT in second place. Tsinghua, Zhejiang, Harbin Institute of Technology, Shanghai Jiao Tong, Xi'an Jiao Tong, Huazhong University of Science and Technology, South China University of Technology, National University of Singapore and Nanyang Technological University in Singapore were all in the world top twenty in the both lists. None of the universities from Japan, South Korea and Taiwan is in either list (Leiden University 2020). They have fine science systems but catch-up to the US peak has not occurred, though Tokyo and Seoul National are strong. Hong Kong does better in mathematics than in physical sciences/engineering. Arguably, China's superior performance in STEM derives not just from its exceptional and focused investment, but its double strategy of building endogenous national capacity while fostering improvement through internationalization, achieving a mutually enhancing synergy between each of global and national research collaboration (Marginson 2018, 2021).

East Asia and the West: Internationalization, Endogenization, and Regionalization

Along with its remarkable development, East Asian higher education is embedded in constant tensions between endogenization, internationalization, and regionalization. Tensions arise both from the East-West relationship and internal dynamics within East Asia. Both 'the East' and 'the West' are constructed based on a differentiation against 'the other' or 'the rest' – see, for example, Edward Said (1977) on 'the Orient' or Stuart Hall (1992) on 'the West'. In East Asia, 'the West' is a frequently used reference point, which is more culturally related than geographically specific. 'The West' can include countries and regions sharing occidental cultures, such as Australia and New Zealand, not geographically located in Europe or North America. In response to Bertrand Russell's book *The Problem of China* (1922), Spanish philosopher José Ortega y Gasset suggested that East and West could 'fall in love':

> Today, the struggle between East and West has the whole demeanour of falling in love. Europe, touched by the deepest spiritual crisis that it has ever suffered, has

> just discovered Asia sentimentally and is experiencing a phase of enthusiasm. At the same time, the East, especially its most profound manifestation, China, has discovered Europe and fallen in love in equal proportion. The finest Westerners of the present time would like to be a little Chinese, in the same way that astute Chinese would like to be people of London, Berlin, or Paris. (Ortega y Gasset 1949, from Lu and Jover 2019)

However, the East and the West have developed a love-hate relationship. In East Asia, the West is perceived as both a friend and foe. In the continued colonial imaginary, the West is symbol of modernity and model of democracy. The West is also a potential political and military ally. Incessant internal conflicts within East Asia makes the continuing external presence of Western power welcome in some countries (Holcombe 2011). According to the colonial perception, the East is still inferior to the West and needs to catch up. Such perceptions feed into the continuing white supremacy and Anglo-Euro hegemony in East Asian higher education, where the 'the foreign moon is fuller' (a Chinese saying, meaning the foreign is always considered better) and where Western knowledge, ideas, models, publications, universities, students and academics are given more privilege than the local equivalents. At the same time, the West is seen as a conqueror, colonizer, competitor, oppressor and exploiter who should be cautioned against. This conflicted mindset has deep roots in colonial history – in the Western colonization of Hong Kong SAR, Macau SAR, Vietnam, Singapore and parts of China since the nineteenth century as well as in Meiji Japan's 'leaving Asia to enter Europe' and the subsequent colonization by Japan of South Korea, Taiwan, Singapore and parts of China. To uproot the colonial aftermath, East Asian systems push back against the persisting Western influences, some to a larger degree than others. China's vigilance towards the West is doubled by Cold War memories and recurring ideological conflicts.

The dual perception of the West is never fully resolved in East Asia and its higher education. The modern higher education systems in East Asia bear Western influences, be it the liberal arts paradigm, the Humboldtian model of universities or the contemporary WCU templates and rankings that apply indicators rooted in Western reality that not surprisingly reproduce Western dominance. Western influences are particularly evident in both the models and practices of the internationalization of higher education. In this chapter, we use 'internationalization' with a neutral normative sense to mean interactions, cooperation, mobilization and communications between nations ('international') but internationalization practice must always be interrogated in terms of the models, norms and behaviours it fosters.

Internationalization approaches differ across the East Asian systems. Here, geography and contextualized cultures matter. Island states can be restricted by their limited resources and face potential dangers of isolation from the continental world. Island systems like Japan, Singapore, Taiwan, Hong Kong SAR, Macau SAR and South Korea (a peninsular state separated by North Korea from the continent) are actively outward-looking, keen to develop external links and maintain a strong presence in the world, to be a nexus of mobilities and to avoid insular status. In comparison, as quasi-continental states, China and Vietnam have resources within the nation, tensions with bordering nations and a more open choice about external engagement. Such states oscillate between times of extensive internationality and times of self-sufficiency and even isolation as the histories of the United States and Russia show. Mongolia is a landlocked country between China and Russia, mostly restricted in resources, vision and engagement with the outside. While the world is connected via the Internet, geographically shaped mindsets persist in the system orientations to internationalization.

Western supremacy could entrench internationalization approaches: national WCU schemes which follow Western models, international partnerships and branch campus mostly developed with Western universities, asymmetrical mobility of students and academics, asymmetrical cross-border research collaborations, the reform of teaching and curriculum to incorporate Anglo-American elements like English-medium instruction, and promotion of Anglo-American elements in research such as prioritizing English-language publications. Although East Asian systems are rising in global science in the bibliometric sense, as outlined, the epistemologies, discourses, methodologies, evaluative criteria bear Western imprints. Internationalization easily becomes a synonym of Westernization.

Despite an immerse local knowledge pool, countries and regions in East Asia prioritize publications in internationally recognized journals, mostly Anglophone and Western (Chou 2014; Shin 2007; Xu 2020). Table 1.5 illustrates strong but unbalanced research collaboration ties between East Asia and the West. Academics in almost all East Asian systems work most closely with researchers from the United States, though Singapore and Mongolia are exceptions. In East Asian systems, the top five collaborators always include China and Japan but the rest are all Western, and while other East Asian systems appear in the top ten collaborators, Western systems have much stronger presence, despite the total weight of East Asian papers in science output. Obversely, in the Western countries that rank high in the volume of science publications, only China from East Asia

Table 1.5 Top Science Collaborators for East Asian and World Top-Performing Systems, 2019

System	World share rank	Top ten collaborators (listed in rank order)
East Asian systems		
China	2	USA, Germany, UK, Australia, **Japan**, **Singapore,** Canada, France, **South Korea**, Sweden
Japan	5	USA, **China**, Germany, UK, France, **South Korea**, Australia, Switzerland, Canada, **Taiwan**
South Korea	8	USA, **China**, **Japan**, Germany, UK, Switzerland, France, Canada, Australia, Italy
Singapore	16	**China**, USA, UK, **Japan**, Australia, Germany, France, **South Korea**, India, Canada
Taiwan	19	USA, **China**, **Japan**, Germany, UK, France, Italy, Australia, Switzerland, **South Korea**
Vietnam	44	USA, **Japan**, Germany, **China**, UK, France, Switzerland, **South Korea**, Australia, Italy
Mongolia	108	**China**, Germany, USA, Russia, Italy, UK, **South Korea**, Sweden, Hungary, **Japan**
Other systems among top ten world share of scientific publications		
USA	1	**China**, UK, Germany, Canada, France, **Japan**, Australia, Switzerland, **South Korea**, Italy
UK	4	USA, Germany, **China**, France, Australia, Switzerland, Italy, Netherlands, Spain, Canada
Germany	3	USA, UK, **China**, France, Switzerland, Netherlands, Italy, Spain, **Japan**, Australia
France	6	USA, Germany, UK, **China**, Switzerland, Italy, Spain, **Japan**, Netherlands, Canada
Canada	7	USA, **China**, UK, Germany, France, **Japan**, Australia, Switzerland, Italy, Netherlands
Switzerland	9	USA, Germany, UK, France, Italy, **China**, Spain, **Japan**, Netherlands, Canada
Australia	10	USA, **China**, UK, Germany, **Japan**, France, Canada, Netherlands, Switzerland, Italy

Note: East Asian systems in bold; no data for Hong Kong and Macau SARs.

Source: Authors, original data from Nature Index (2021).

figures in the top five collaborators; all the rest are Western countries, except in Australia where Japan is fifth collaborator. Furthermore, not all collaborations are conducted on an equal basis. Some retain colonial and exploitive features.

Patterns in international student mobility between the East and the West are more asymmetrical than the relations in research. As Table 1.6 shows,

Table 1.6 Mobility Patterns of Outbound and Inbound Students of East Asian Education Systems

Systems	Top ten outgoing student destination systems[a]	Top ten systems of incoming student systems
China	USA, Australia, UK, **Japan**, Canada, **South Korea**, **Hong Kong SAR**, Germany, France, New Zealand	n.a.
Hong Kong SAR	USA, Canada, **Macau SAR**, **South Korea**, Germany, Ireland, Switzerland, Brazil, Norway, Malaysia	**China**, **South Korea**, India, Indonesia, Malaysia, Pakistan, **Macau SAR**, Kazakhstan, USA, Bangladesh
Macau SAR	**Hong Kong SAR**, Portugal, Canada, **South Korea**, Morocco, Germany	**China**, **Hong Kong SAR**, Cabo Verde, Portugal, Malaysia, Brazil, Philippines, **Japan**, **South Korea**, Guinea-Bissau
Japan	USA, UK, Australia, Germany, Canada, **South Korea**, Brazil, France, Malaysia, Hungary	**China**, **Vietnam**, Nepal, **South Korea**, Indonesia, Thailand, Sri Lanka, Myanmar, Malaysia, USA
Mongolia	**South Korea**, **Japan**, USA, Australia, Kazakhstan, Turkey, Germany, Hungary, Austria, UK	**China**, Russia, **South Korea**, **Japan**, Turkey, Vietnam, Laos, **North Korea**, Poland, Afghanistan
Singapore	Australia, UK, USA, Malaysia, Germany, Canada, Ireland, New Zealand, **Japan**, Switzerland	n.a.
South Korea	USA, **Japan**, Australia, Canada, UK, Germany, France, **Hong Kong SAR**, New Zealand, Netherlands	**China**, **Vietnam**, **Mongolia**, Uzbekistan, **Japan**, Pakistan, Nepal, USA, Indonesia, Bangladesh
Vietnam	**Japan**, USA, Australia, **South Korea**, France, UK, Germany, Canada, Finland, New Zealand	Laos, Cambodia, **South Korea**, **China**, France, Myanmar, Mozambique, Timor-Leste, Thailand, Nigeria

Note: n.a. indicates data not available.

[a] Data not available for Taiwan; for China and Singapore's inbound students' origins; for Macau SAR's destination country after Germany; East Asian systems are in bold.

Source: Authors, original data from UNESCO (2021).

while Western countries are the top destinations for students moving out of most East Asian systems, Western students do not dominate the lists of students moving to East Asian countries. East Asian countries mostly attract students from East Asia, Southeast Asia and Central Asia – another example of bottom-up regionalization. Only Hong Kong SAR, Macau SAR, Japan, South Korea and Vietnam attract Western students from the United States, France and Portugal (note that in each case there is a historical imperial or neo-imperial relationship). This indicates persisting perceptions of the Western countries as old acquaintances through coloniality, as bearers of modern knowledge and cutting-edge research, as providers of quality education and valued accreditation, and as guarantors of better life and employment opportunities. The 'Western Dream' (especially the 'American Dream') is still alive and well. But the landscape is changing, with Singapore, Hong Kong SAR and then China rising as regional educational hubs, offering familiar cultural magnets and rising prospects for better futures (Lee 2015).

East Asia is never fully Westernized. The fundamental cultural differences between the East and the West make it impossible to fully assimilate each other. East Asian higher education systems are resilient and are increasingly active in shaping their own agendas, working with not only global benchmarks but also national-cultural models. There are push-backs from academics, institutions and governments against the reproduction of Western supremacy into national higher education systems. National policies issued in 2020 by the Chinese government firmly asserted the importance of domestic publications in the Chinese language and rejected the previous '(S) SCI supremacy' (MOE 2020; MOE and Ministry of Science and Technology 2020). The constant emphasis on 'Chinese characteristics' and 'Chinalization' of higher education and research again indicates endogenization efforts (Xu 2021a). De-Westernization also happens in scholarly investigation on (East) Asia. The 'inter-referencing' approach proposed by Chen Kuan-Hsing (2010) in the book *Asia as Method* raised a possibility of comparing Asia with Asian characteristics, not against Western standards. Similarly, Japanese Sinologist Yoshimi Takeuchi expresses the idea of replacing the East-West dichotomy with a broader framework:

> It is important in analysing Japan to refer to the United States and Western Europe, for they represent the advanced nations of modernisation. Nevertheless, we must also look elsewhere. In studying China, for example, we should not limit ourselves to seeing this nation only vis-à-vis the West. It was at this time that I realized the importance of conceiving of modernisation on the basis of

a more complex framework than that of simple binary oppositions. (Takeuchi 1961: 156–7)

The Book

The book by no means exhausts the issues relevant to higher education development in East Asia. No chapter specifically examines the massification of higher education in East Asia (though see Yonezawa and Huang 2018 for a discussion of Japan in global context); none discusses collaborations in Eurasia or East-South cooperation, both of which have growing significance in East Asian and global higher education. Those are themes for future research.

The contents of *Changing Higher Education in East Asia* exemplify the *he er bu tong* (和而不同) idea of 'harmony without uniformity'[1] suggested in the opening of this chapter. Each chapter is different in scope and focus, but we trust that they share commonality and complementarity. Common strands of discussion include how the Sinic tradition (evident not only in China but also in the South Korean *jeong* perspective which has Sinic roots) intersects with the up to now primarily Anglo-American globalization of higher education, how Eastern universities engage with Western ideas, how individual and institutional agency plays out in the East Asian higher education context, and how geopolitics has shaped and continues to shape the higher education landscape in East Asia. All chapters showcase the uniqueness of East Asian higher education as individual national/regional systems and as a cultural region.

Another recurring theme is the integration of 'Eastern' and 'Western' knowledges, and realities. East Asia is inseparable from the West. The contents of this book reflect the interplay between the two. Equal dialogues across cultures can foster hybridization and greater common understandings. Furthermore, valuing, articulating and engaging with Eastern knowledge in the Western dominated research space contribute to epistemic diversity and justice (Xu 2021b). In general, Western concepts, methodologies, epistemologies and language are evident in all chapters: not least because the book is written and published in English. Western models of universities, such as the WCU model

[1] The Chinese phrase *he er bu tong* (和而不同) have various English translations. Three translations exist in this book: 'harmony without uniformity' in the Preface and Chapter 1, 'harmony without conformity' in Chapter 3, and 'unity in diversity' in Chapter 4. While we all engage with this term, interpretations differ and the choices of translations differ. This exemplifies the *he er bu tong* idea. In line with *he er bu tong*, we as editors respect authors' choices and have kept their chosen translations in respective chapters.

discussed in Chapter 5, and Western discourses about higher education, such as 'global public/common good' and 'global citizenship education' discussed in Chapters 2–5, and the Western-origin concept of student agency, as detailed in Chapter 10, are highlighted in the book. Nonetheless, these are not discussions that use a Western lens to examine Eastern reality, a pitfall postcolonial and decolonial scholarships rightly warns against (Yang 2019). It is almost the reverse. For example, in Chapters 2–4 the Western notions are interrogated in the light of Eastern ideas, scholarship and practices. In all chapters, the question of Western models and their applicability or not is a continuing reflexive theme. All chapters engage with the local and endogenous tradition, knowledge, epistemologies, expressions, discourses, practices, reality and culture, some more vigorously than others. Their explorations do not merely transplant Western ontological, epistemological or methodological assumptions to the East Asian reality. All have roots in East Asian knowledge and reality. All articulate the uniqueness of the East while achieving at least some synthesis across local, national, regional and global (including Western) knowledges. All, in their various ways, are working in an indeterminate and exciting cultural zone in which new perspectives, insights and hybrids constantly appear.

Both editors have rich experiences with and profound academic interests in both 'Eastern' and 'Western' traditions, cultures and higher education. All the non-Asia-based authors have long-standing academic experiences and scholarly interests in East Asian higher education. All of the Asia-based authors have rich experiences with and comprehensive understandings of Western higher education and research. We believe that our contributors have navigated through Western and Eastern perspectives without privileging any of them, and have achieved meaningful dialogues through complementarity. In sum, although this book does not directly address decolonial issues, we hope that it testifies that epistemic diversity, mutual understandings and equal cross-cultural dialogues are not only desirable but also viable in the ecology of global knowledge (Santos 2014; Marginson and Xu 2021).

Chapter Contents

The chapters that follow address different aspects of East Asian higher education provision, development, originality and the tensions inherent in internationalization and identity. They come in three parts. Each part opens with a word that exists in written languages of Chinese, Japanese, Korean, and

Vietnamese. Each word foregrounds the theme of each part: 和 (mainly means 'harmony and peace') for Part 1 on global public good; 天下 (mainly means 'the world') for Part 2 on internationalization and endogenization, regionalization and globalization; 人 (mainly means 'human') for Part 3 on international mobility and academic migration. The three words also embody philosophical traditions and ontological understandings from East Asia about relationships, the world and humanity. Meanings of each word are largely common across the languages, but differences exist. These characters were chosen to exhibit the beauty of East Asian cultures, highlight their philosophical value, illustrate the cultural commonalities within the region and demonstrate nuances across them.

Part 1 on 'Higher Education and the Global Common Good' locates the largely Western origin discourses of global public good and global citizenship in the East Asian higher education context. Chapter 2 by Olga Mun and Yunkyung Min, working with interviews in South Korea, applies the endogenous lens of *jeong* to explore the global public role of higher education. Lili Yang's Chapter 3 proposes the Chinese idea *tianxia weigong* as an arguably richer approach to understanding global public/common good in general and in higher education, and discusses the implications in higher education practices. In Chapter 4, Arzhia Habibi reviews the literature on global and world citizenship education in Chinese and English languages, with a special focus on their articulation in Chinese higher education. Chapter 5 by Lin Tian and Nian Cai Liu reports on seventy-four interviews conducted in China, Western Europe and the United States which discussed the education, research and service functions of WCUs, enabling a regional comparison of how they understand their contributions to the global common good.

Part 2 on 'Internationalization and Endogenization, Regionalization and Globalization' explores the interplay, synergies, dynamics and differences between various ways in higher education of seeing and practising the self and the world: forming the nation, imitating the West, focusing on the East Asian region, reaching out to influence the global. Chapter 6 by Christopher D. Hammond, drawing on sixty-seven interviews in Japan, examines the current state and possible futures of regional cooperation in Northeast Asian higher education, with focus on government-initiated programmes in student mobility and science. In Chapter 7, Xin Xu discusses tensions in internationalizing Chinese humanities and social sciences research, with a contextual agency framework developed from English and Chinese discourses. Chapter 8 by Julie Chia-Yi Lin explores the internationalization of higher

education in Taiwan, in the context of the ongoing contests and ambiguities of the Taiwan project, drawing on analysis of governmental policies and interviews with senior university administrators. In Chapter 9, Ly Thi Tran, Huong Le Thanh Phan and Huyen Bui locate the internationalization of higher education in Vietnam in the changing national and geopolitical contexts before and after the watershed Đổi Mới social and economic reform in Vietnam.

The final section is on 'International Mobility and Academic Migration' in East Asian higher education. Chapter 10 by Thomas Brotherhood explores the role of individual agency in the education-migration nexus, with evidence from biographical-narrative interviews with international student-migrants in Japan. Futao Huang's Chapter 11 investigates the characteristics, motivation and work roles of non-language-teaching international faculty in Chinese higher education, drawing on survey and interview data. Chapter 12 by Ka Ho Mok examines the impact of the Covid-19 pandemic on the internationalization of higher education, student mobility and regional collaboration in East Asia. Also drawing on empirical survey data, and while noting the fast changing and fracturing geopolitics of the US-China relationship, the chapter suggests implications of the pandemic period for the future development of higher education in East Asia and the rest of the world.