




Can the Locked-In Be Unlocked? University Stratification in China Under State-Led Quest for World-Class Universities

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Abstract

Emerging studies on university stratification have often attributed the developmental gaps between universities to the popularization of new public management in contexts where market mechanisms prevail in higher education governance. However, less attention has been paid to how state powers continue to mediate university stratification alongside market influence. Embracing the competitive emphasis of new public management, the Chinese state has launched a new world-class university scheme, the Double World-class (DWC) Project, replacing the past one, Project 985/211. Tracing the continuities and changes from Project 985/211 to the DWC Project, this study examines the mechanisms and outcomes of China's university stratification at two levels. Firstly, the DWC Project has reproduced and reinforced the overall stratified landscape of China's universities. The state-designated hierarchy of elite and non-elite universities is reproduced in a more complex form of market-based stratification through what we propose as a “lock-in cycle” mechanism. Secondly, the DWC Project is nonetheless reshuffling the internal stratification of elite universities in three aspects: privileged identities are becoming volatile, which catalyzes inter-university competition financed by local governments; the distinction between central and local universities is collapsing when stratification becomes increasingly discipline-based; and the rising market-based stratification is challenging the state-designated hierarchy and the lock-in cycle.

Keywords University stratification · New public management · World-class universities · Double world-class project · Lock-in cycle · China

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Introduction

Social stratification and mobility are deeply enmeshed with education (Bourdieu 1973; Boudon 1974). The extant related literature largely focuses on education inequality at the individual level, emphasizing that individuals or groups with higher educational attainment usually have greater prestige, power, and wealth than others, and their children often have better access to quality education resources. However, inequality also exists among higher education (HE) institutions. Some universities have more funding, better teachers or students, and greater influence and reputation than others. While this observation is not new for many countries (Davies and Zarifa 2012; Jeon and Kim 2018), attention is growing about how prevailing patterns of university stratification may be reshaped by the proliferating “world-class universities” scheme across many countries. Despite the highly contested definition and criteria of elite or world-class universities (Li 2012), the quest for “world-class universities” is shared by a growing number of national governments, including that of China (Jiang and Mok 2019). In fact, China created the first global university ranking for measuring university strata in 2003, i.e. the Academic Ranking of World Universities (ARWU). Moreover, the Chinese government was also among the first to initiate “world-class universities” schemes in the mid-1990s, collectively known as Project 985/211.

The state has played a pivotal role in nurturing elite universities and shaping university stratification in many countries, and China is a representative case. The Chinese government prioritizes support to a tiny fraction of the country’s thousands of universities through its elite university schemes, which until recently hardly allowed universities to compete to join them through any channels other than administrative designation. As the membership of the designated universities remained unchanged, the incentives for both members and non-members of such schemes to compete for funding or close their gap with internationally prestigious universities were weak (Zong and Zhang 2019). Determined to improve its HE quality to promote China’s international competitiveness, the Chinese state launched the Double World-class (DWC) Project in 2015, attempting to dethrone the lasting static administrative designations of elite universities. The aspiration is to nurture a batch of “world-class universities” by way of introducing new public management (NPM) to the HE sector (Liu 2018; Peters and Besley 2018). The core tenet is to establish merit-based, competitive mechanisms of resource distribution to supplant the rigid model of administrative allocation underpinning Project 985/211 (Zhao and You 2021), thereby creating an impetus for Chinese universities to improve their positions relative to their domestic and international counterparts.

Previous studies have examined the causalities between university stratification and NPM reforms in countries where such reforms replace the “state control model” of HE governance with a “state supervisory model” (Broucker and De Wit 2015), under which the state only defines the competition-oriented criteria of success for universities to secure state support and leaves the universities to improve competitiveness in their own ways (Halffman and Leydesdorff 2010;

Davies and Zarifa 2012; Hicks 2012; Beerkens 2013; Münch 2014; Lau and Rosen 2016; Jeon and Kim 2018). Conversely, much less attention has been paid to the mechanisms of university stratification in institutional contexts where the state still has rigid control over the HE sector (Zhao and You 2021), e.g. setting student recruitment quotas and monopolizing academic degree conferment. HE studies on China have testified that the Chinese state still has powerful control over its HE sector (Mok 2010; Han and Xu 2019; Zhao and You 2021); the state is not totally retreating from HE but only enhancing its repertoire of regulations with market instruments. In this regard, China's regime of elite university nurturing has evolved into a hybrid model, i.e. a central state-controlled system embracing NPM tactics.

This study explores how state powers operate as primary drivers of China's university stratification. We distinguish two interrelated forms of stratification, i.e. state-designated hierarchy created by state-led elite university schemes and market-based stratification catalyzed by popular university ranking league tables. Our empirical analysis examines China's university stratification at two levels. We argue that, at the general level, the DWC Project is reproducing the overall stratified landscape of China's HE sector established by Project 985/211, through both a state-designated hierarchy and market-based stratification. The state-designated hierarchy is reproduced and recast into market stratification through what we propose as a "lock-in cycle" mechanism. Differing from market-based university governance in other contexts, the components of the lock-in cycle, e.g. student admission and academic degree conferring, are rigidly controlled by the state in China. Nonetheless, when looking at the level of the sub-group of China's elite universities, the DWC Project is reshaping the internal stratification and mobility of the elite cohort.

Institutional Inequality and University Stratification: Towards a Hybrid Model of World-Class University Quest in China

At the individual level, stratification refers to "the allocation of individuals and groups according to various social hierarchies of differing power, status, or prestige" (Andersen 2011, p. 1). People from different social strata have varied access to resources or capabilities to capture resources, such as income, education, healthcare, political representation, and career choices (Lueg 2017). Concerning the movement of their positions among social strata, the increase or decrease in the class or status of individuals or groups leads to upward or downward social mobility, respectively. Societies with strict boundaries between strata restrict such movements and can result in class reproduction.

Whether education facilitates social mobility or leads to class reproduction is a topic of much scholarly debate. Some argue that education equips individuals with better human capital to adapt to the division of labour in modern society (Meyer 1977), and climb the social ladder regardless of their current status, thus promoting upward social mobility and ameliorating social inequality (Breen and Jons-son 2005). Meanwhile, others claim that education underpins social reproduction and class consolidation. For instance, Bourdieu argues in his influential thesis that

education is crucial for the reproduction of the structure of power relationships and the symbolic relationships between classes, both guaranteeing and legitimizing them (Bourdieu 1973). Applying Bourdieu's line of argument to China, scholars contend that education is a cultural reproduction process that results in rural-to-urban migrants' low social status and the class consolidation of Chinese society (Chiang et al. 2015; Wang and He 2019).

The foregoing strand of analysis provides important insights into education-related inequalities at the individual level. Similarly, HE institutions are also stratified in terms of "history, resources, academic provision, status, and student body" (Leathwood 2004, p. 34). However, compared to the large body of literature on individual stratification and mobility, university stratification at the institutional level has received little attention. In fact, university stratification constitutes an essential component of the structural inequality of HE, given that universities are providers of HE as public goods. Davies and Zarifa (2012) describe university stratification as a structural component of "horizontal inequality" in HE, which is exacerbated by current pressures for universities to compete for resources and status. It is a form of structural inequality at a macro level within which individual educational inequalities at a micro level are situated. University stratification directly shapes the educational opportunities that people can access and their chances for upward social mobility. Therefore, university stratification structuralizes individual-level stratification and mobility and deserves equal, if not more, research attention.

University stratification has historically prevailed in some countries as a result of administrative division, as in Australia (Beerkens 2013), the UK (Leathwood 2004), and France (Austin and Jones 2015). However, since the 1980s, the introduction of NPM into the HE sector in many countries, in the name of improving public accountability and efficiency of universities, has been widely seen as the new driver of stratification among universities. Underpinned by "a combination of free-market rhetoric and intensive managerial control practices" (Lorenz 2012, p. 600), NPM brings to the HE sector competitive performance-based systems of state funding allocation and tactical evaluation of university performance (Neave 1988; Lorenz 2012; Shore and Wright 2015). Institutions ranking at the top of evaluations can secure the most resources and highest symbolic value (Chiang et al. 2015).

The influences of such performance-based mechanisms have been debated widely in emerging studies on university stratification (Hicks 2012; Münch 2014; Lau and Rosen 2016). Some view this merit-based orientation positively as holding the potential to "level the playing field" by offering opportunities for lower-level universities to gain more resources through outstanding performance, particularly in research (Beerkens 2013, p. 158), with universities not necessarily becoming more unequal at both the global and national level (Ville et al. 2006; Halffman and Leydesdorff 2010). Others criticize that the competitive system maintains the status quo or amplifies stratification due to the cumulative advantage of those already in the upper stratum, in terms of both research inputs, i.e. research funds or endowments (Davies and Zarifa 2012), and research outputs, i.e., research performance epitomized by publication counts (Beerkens 2013; Jeon and Kim 2018). Still some others acknowledge and justify university stratification manifested as the selective funding of a handful of high-performing universities because these institutions serve

as “flagships” for countries to sail through the global competition in the HE realm (Douglass 2016).

These emerging studies shed important light on the state of play of university stratification in contexts where NPM-based reform also involves granting universities more autonomy so they can seek their own ways to best meet the state’s strategic objectives on HE and successfully compete for state support (Broucker and De Wit 2015). However, NPM does not always find its way into HE in the same intensity, whether in terms of its competitive or autonomous elements. Such is the case of China, which now enshrines a hybrid governance model combining some competitive elements of NPM with a longstanding centrally-planned system. The state still controls many pivotal issues of university operation, such as leadership appointment, staff recruitment, curriculum setting, student admissions, funding resources, and academic degree conferment at different levels (Mok 2010; Han and Xu 2019).

Chinese universities’ quest for world-class status has been under the state’s direct planning, control, and regulation. The Chinese state promotes the development of a small number of universities to match the achievements of the globally leading ones by pooling nationwide resources under state-led elite university schemes. Reflecting on its earlier elite university schemes, the Chinese state acknowledged that, to turn Chinese universities into world-class institutions, it had to overcome the defects of lack of competition in the rigid centrally controlled system. Against this backdrop, it launched the DWC Project in 2015 to introduce competitive mechanisms into the HE sector. In this paper, we are concerned about how state powers work in producing China’s university stratification. Can the hybrid model of nurturing world-class universities epitomized by the DWC Project encourage mobility across strata as it promises, allowing more Chinese universities to become world-leading? Or would it reinforce stratification rooted in earlier rounds of HE planning made by the central government in Project 985/211?

To address these questions, from 2019 to 2022, we reviewed policy documents, officials’ speeches and media reports to reveal the Chinese state’s intention for Project 985/211 and the DWC Project, and the implications of these projects on the universities included or excluded by them. Moreover, we interviewed over 20 faculty members from 11 Chinese universities, including five elite and six non-elite ones as classified by the DWC Project, for comments on the impacts of the elite university schemes on their respective universities. Given that the DWC Project is still a new elite university scheme, there are no comprehensive and updated quantitative datasets that can measure the changes in stratification. Therefore, this study draws primarily on qualitative data obtained from policy analysis and interviews.

Reforming China’s State-Led Construction of World-Class Universities: From Project 985/211 to the DWC Project

Chinese universities have long been stratified since the founding of the People’s Republic of China. The designation of National Key Universities existed in the 1950s. Nonetheless, China’s HE was dramatically disturbed and suspended during the Cultural Revolution between the 1960s and 1970s. With the onset of China’s

reform and opening up, the state initiated a series of reforms in China's HE sector in the 1980s and 1990s. Previously, universities were managed by ministries of the central government. In 1998, the administrative oversight of most of these ministry-led universities were delegated to local governments. Since then, the fundamental structure of China's HE governance has been based on two levels of management, i.e. the central and local (mainly provincial) governments. According to their governing bodies, Chinese universities are classified into ministry-affiliated universities (known as central universities) and province- or municipality-affiliated universities (collectively known as local universities).

Given these dramatic contextual changes, the empirical analysis of this paper only focuses on China's state practices of world-class university nurturing since the 1990s, particularly recent changes brought by the DWC Project. In 1995, China initiated Project 211 (where "211" is the abbreviation for "100 universities for the twenty-first century") to promote approximately 100 universities as national key universities, aiming to facilitate national socio-economic development in the twenty-first century. In May 1998, the then Chinese President Jiang Zemin announced Project 985 (named after the announcement date), aiming to promote the development of a certain number of universities into world-class ones to carry forward China's modernization. Universities included in Project 985 were a subset of universities included in Project 211.

The selection process of Project 985/211 universities was neither transparent nor fair, i.e. based on prevailing research and teaching capability or university reputation, but was based on administrative discretion. Central universities were largely privileged over local or private universities. In total, 116 universities, comprised of 28 local universities and 88 central universities, were included in Project 211. Among the 118 central universities, 88 were included in Project 211. After the central universities were first selected, the remaining quota was then equally allocated to each province, with the provincial government choosing at its discretion which university in its jurisdictions could join the project. Each province only had one quota. Eventually, 28 out of the 1,736 local universities were included in Project 211, and none of the 742 private universities was included, despite local and private universities accounting for 95.5 per cent of the total number of China's universities. Without any third-party standards in the 1990s (e.g. university ranking), the selection of Project 985 universities was governed by administrative discretion to an even greater degree. All of the 39 universities included in Project 985 were central universities. Decisions were made by the Ministry of Education (MOE) in a non-transparent manner as well, without any application or evaluation process (Interview with Professor A, an expert on China's elite university schemes, 2020). Such non-merit-based selection practices were further complicated by contested state-university bargaining processes. The list of Project 985/211 universities kept expanding, with more universities being added, largely as a result of universities' substantial lobbying activities and negotiations with the MOE (e.g. by drawing on their alumni network). Some universities successfully joined the project by promising the MOE that they only needed to be bestowed the "985/211" title without receiving special funding from the MOE (*ibid.*).

The state set up Project 985/211 Special Funding, which was allocated to the fixed group of Project 985/211 universities regardless of their performance. As a result, Project 985/211 was often criticized by the public and those excluded universities for its lack of competition and its impediment to the efficiency of public resources usage. Against this backdrop, the MOE draws on NPM in recent years, launching the DWC Project at the end of 2015. The overarching aim of the DWC Project, defined ambiguously, is that “by 2050, the number of Chinese world-class universities and disciplines will be massively increased and ranked at the top of international rankings” (State Council 2015). To achieve this aim, the project seeks to establish a competition mechanism to hold universities accountable, so as to ameliorate the problem of “identity solidification” of universities that characterized Project 985/211. It aspires to build a system characterized by “open competition, dynamic adjustment, and performance incentives” (ibid.), claiming to treat central and local universities equally by a performance-oriented selection process based on objective evaluation and standards. The process of selecting DWC-targeted disciplines and universities involves third-party evaluation and university rankings, a pivotal difference vis-à-vis Project 985/211. Both domestic criteria, epitomized by the MOE’s annual discipline evaluation results or universities’ achievements in winning national-level scientific awards, and international criteria, such as subject ranking in Essential Science Indicators (ESI), were employed by the national DWC committee to shortlist target funding universities or conduct evaluations to hold selected universities accountable. Since 2016, the list of the DWC universities has been reviewed and updated according to the evaluation results every five years. The list of universities included in the second round of the DWC Project was announced in January 2022.

Based on the analysis of the first and second round of the DWC Project, the following sections examine China’s university stratification in the DWC era at two levels: Section 4 focuses on the analysis of university stratification at the general level of China’s overall HE landscape, while Section 5 presents the analysis of the internal stratification among the subgroup of China’s elite universities.

“Class Reproduction” of China’s Overall Higher Education Landscape

Project 985/211 greatly transformed China’s HE sector and created a salient stratification between universities included and those excluded. This stratification of China’s HE sector is now being reproduced and reinforced by the DWC Project through both state-designated hierarchy and market-based stratification.

Reproduction of the Elites and Non-elites in the State-Designated Hierarchy

In general, the two rounds of the DWC Project have largely reproduced the distinction between the elite and non-elite universities and reinforced the stratified structure of China’s HE sector shaped by Project 985/211.

Although the DWC Project aims to increase competition and treat central and local universities equally, it also paradoxically foregrounds the necessity to “take full consideration of the foundation laid by previous elite university initiatives, such as Project 985/211, and inherit their achievements” (MOE 2017). The selection standards of DWC specify that “world-class universities should be those under the nation’s longstanding key construction; those [that] have advanced educational ideas, strong capabilities, and high social recognition; those [that] have a certain number of national-leading, world-frontier disciplines” (ibid.). Such articles strongly hint that the former Project 985/211 universities are the most legitimate nominees for the DWC Project.

In the first round of the DWC Project (2016–2021), the selected 137 DWC universities comprised two types of universities: 42 universities selected for constructing world-class universities (WCUs) and 137 universities selected for constructing world-class disciplines (WCD universities). WCUs and WCD universities were collectively known as DWC universities and focused on the development of the entire university and particular disciplines, respectively. However, WCUs and WCD universities were generally seen by the public as the continuation of Project 985 and Project 211, respectively (Fig. 1). WCUs generally had more funding than WCD universities. The budget revenue of WCUs was generally above 5 billion yuan, while WCD universities were between 1 billion yuan and 5 billion yuan, and most non-DWC universities were less than 1 billion yuan (Cingta 2020). Among the 42 universities selected as WCUs, 39 were former Project 985 universities. Similarly, all the previous Project 211 universities were included as WCD universities. Even those Project 211 universities without qualified disciplines were given privileges by the MOE to self-identify some (usually one) disciplines for WCD construction (Interview with Professor A 2020), contradicting the DWC Project’s competitive selection principle.

In the second round of the DWC Project (2022–2027), announced in February 2022, 147 universities are included in the DWC Project. Seven of them are new to the project, while all of the 137 universities included in the first round are retained. This adjustment reinforces the longstanding “addition principle” of China’s elite university schemes, whose membership is always expanded rather than curtailed, as the state worried about the disastrous impacts on universities removed from the scheme (Interview with Professor A, 2020). At the outset of Project 985, only nine

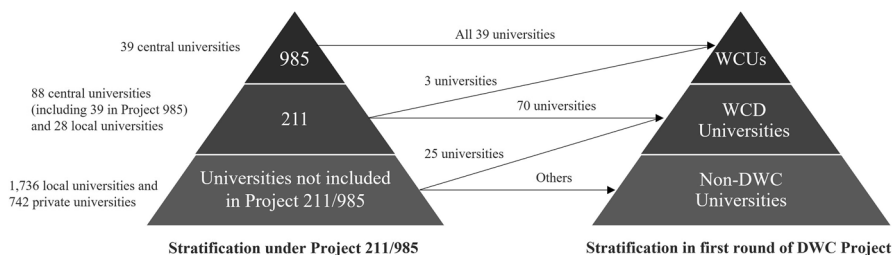


Fig. 1 Reproduction of state-designated hierarchy in the first round of the DWC Project. *Source:* The authors

universities were included. These nine universities receive around half of the Project 985 funding between 1999 and 2009. In 2000 and 2004, 26 universities and four universities were, respectively, added to Project 985. In a similar vein, the number of Project 211 universities gradually increased from 98 in 1996 to 115 in 2014. Once universities were included, “Project 985/211 universities” became a fixed label of “the elite” endorsed by the state and thus a key to state privileges. Between 1996 and 2005, 25.05 billion yuan was conferred by the central and local states to Project 211 universities as Special Project 211 Funding (MOE 2015). In 2006, the central state announced another 10 billion investment into Project 211 universities (*ibid.*). Between 1998 and 2010, the central and local states allocated 90.48 billion yuan as Special Project 985 Funding to Project 985 universities (*ibid.*).

Although the elite identity becomes more volatile under the DWC era, the “addition principle” still applies up to now when comparing the lists of universities included in the first and second rounds of the DWC Project. The principle of “dynamic adjustment” claimed by the state has not been fully executed, given that it is more likely for universities to be added to the list than have their elite status revoked. The quest for policy continuity paradoxically compromises the state’s efforts to eradicate the “identity solidification” of universities produced by Project 985/211.

Similar to Project 985/211, the DWC Project is inherently an elite university scheme, covering only around 5% of 3,005 Chinese universities. The previous Project 985/211 universities have the cumulative advantage in inter-university competition in the DWC era, locking them in the upper class of Chinese universities. After being selected as the DWC Project, member universities saw an increase in their annual appropriation budget by 31.21 per cent from 2017 to 2020 (Cingta 2020). Nonetheless, most of the 3,005 Chinese universities remain the invisible majority in China’s DWC Project just as they were in the Project 985/211 era. The DWC Project is of little significance to these universities, and most of them are detached from it. Their status remains unchanged in a state-designated hierarchy of universities. The DWC universities generally have overwhelming advantages over them in all aspects, e.g. student admission, teaching, research, and so on, to which we now turn.

Reproducing the State-Designated Hierarchy in Market-Based Stratification: A Lock-in Cycle

Market-based stratification of universities is epitomized by a university’s reputation and position in popular university rankings league tables. In China, the hierarchy of universities created by the state is reproduced and recast in market-based stratification in the sense that major indicators for measuring a university’s position, e.g. academic reputation and employer reputation, are significantly influenced by the state-led world-class initiatives.

A “lock-in cycle” mechanism is responsible for this reproduction. It is a cycle that ensures the superiority and competence of elite 985/211/DWC universities (mainly central universities) while locking non-985/211/DWC universities (all of them are

local and private universities) in highly disadvantageous positions in the competition for pursuing world-class status. The lock-in cycle includes many causally inter-related components that contribute to university reputation and rankings, ranging from student admission, teaching and research staff recruitment, research output and evaluation, research grants and education funding attainment, employment conditions of graduates, to alumni influence (Fig. 2). These components are either directly controlled or significantly shaped by state powers.

The first key component of the lock-in cycle is student recruitment at both undergraduate and postgraduate levels. Unlike the open competitive mechanism, undergraduate student admissions in China are conducted in different stages. Universities are categorized into Benke and Zhuanke universities, entitled to grant Benke degree (bachelor’s degree) and Zhuanke degree (associate bachelor’s degree) to their graduates, respectively. Both are undergraduate degrees. Zhuanke is considered the more vocational route and Benke the more academic route in undergraduate education (Yu et al. 2012). Student admission of Benke universities is conducted ahead of Zhuanke universities in three rounds. All 985/211/DWC universities and a small number of other local universities participate in the first round, having the priority to recruit the most outstanding students. The remaining students could apply to universities in later rounds. Most of the non-985/211 local public universities participated in the second round, while private universities that are allowed to grant bachelor’s degrees take part in the third round. Although many provinces have recently dispensed with this tiered system of student admission, the hierarchy created by the

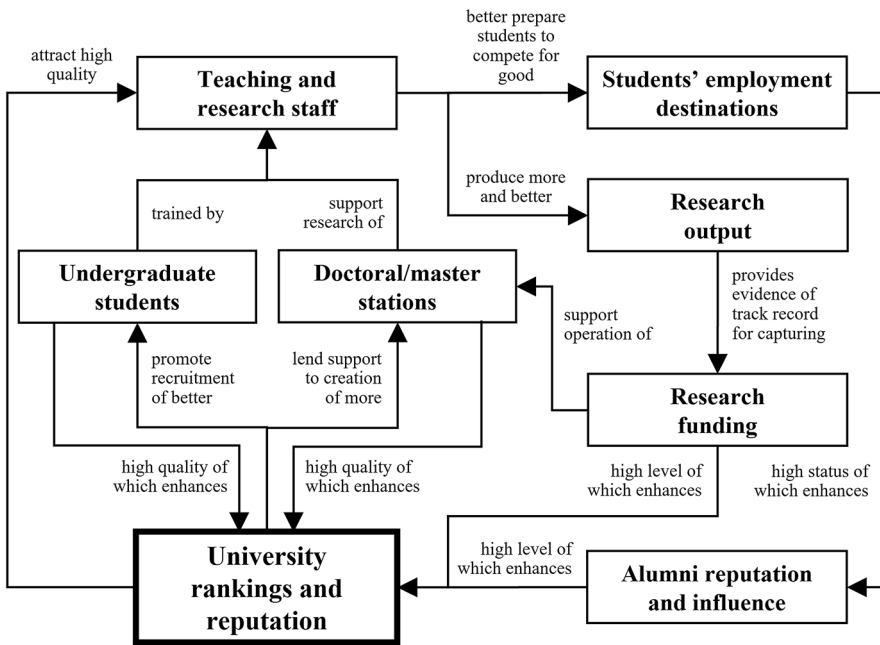


Fig. 2 Lock-in cycle in China’s higher education system. Source: The authors

state has arguably taken root in the minds of the public and is still affecting their college choices. Compared to the overall university admission rate of 72.91%, only 5.89% of the students sitting for China's National College Entrance examination can go to Project 211 universities (Cai and Yan 2015). Lastly, the lowest-performing students go to Zhuanke universities, or choose not to attend one at all because graduates with a Zhuanke degree often face difficulties in finding a decent job.

Graduate student admissions are stratified as well. In China, only disciplines with doctoral/master stations (*boshi/shuoshi dian*) approved by the MOE are allowed to set up doctoral/master programmes. By 2014, there were 2,495 doctoral stations in 256 Chinese universities, of which 1,526 belonged to the 118 central universities and 969 to the 1,736 local universities. Between 1995 and 2005, the 115 Project 211 universities trained four-fifths of China's PhD students (MOE 2015). Although some local universities (often municipality-affiliated universities) that were excluded from Project 985/211/DWC, e.g. Shenzhen University, have witnessed rapid development over the last two decades under the local government's strong support, it is very difficult for them to apply for the MOE's approval to operate doctoral stations. Until recently, the adjustment of the doctoral stations was conducted every eight years. As a result, departments that missed the opportunity in 2005 could only apply again in 2013. Without the right to recruit research students, local universities' development has been greatly hampered (Interview with Professor B, an early-career researcher, 2019).

The elite Project 985/211/DWC universities monopolize not only competent students but also premier research and teaching staff. With abundant resources and the brand of "985/211/DWC" granted by the state, they have more advantages in attracting outstanding young talents to their staff pools. Moreover, the quality of a university's students, especially competent research students, has a tremendous impact on researchers' academic careers in China (Interview with Professor B, 2019). Competitive research students are of great value in building high-level research teams, especially for natural sciences. As some scholars commented, in Project 985/211 universities, "students are just more capable and proactive in all aspects; their thoughts are more active; they are more responsible and have stronger research capability" (*ibid.*). Research activities require trained doctoral students to design and perform experiments, undertake field investigations, draft academic reports and journal papers, and lead master's students and undergraduates in teamwork (e.g. application for research funding) (*ibid.*). The calibre of the research teams determines both the quantity and quality of research output, which are key criteria of scholars' performance evaluation.

With regard to research funding, which is extra funding beyond the special Project 985/211 funding noted in section 4.1, Project 985/211/DWC universities have an overwhelming advantage as well. Despite the fact that the application procedure for national research funding (e.g. those under the Natural Science Foundation of China) is supposedly based on open competition, Project 985/211/DWC universities have higher chances than other universities of winning the funding. This is because they have a large number of researchers with a good research track record, which is valued in the assessment of research funding applications, and they can provide their researchers with strong research support. The 115 Project 985/211 universities

hosted 96% of China's national State Key Laboratories (Cai and Yan 2015). Among the academic papers published between 2009 and 2013, two-thirds were from Project 985/211 universities (Zeng and Li 2014). In addition, social networks within the academic community also play a significant role. Many professors at 985/211/DWC universities are either members of national research funding evaluation committees or have close connections with them. Among the 264.7 billion yuan government research funding granted between 2009 and 2013, 72 per cent was achieved by the 112 Project 985/211 universities, and only 28 per cent was shared by the remaining 1736 local universities (Zeng and Li 2014), excluding private universities completely. As far as budget is concerned, education expenditure per student, an important indicator in university rankings, showed great disparities between 985/211/DWC universities and others as well. The average education expenditure per student in central universities was 54,777.28 yuan in 2017, more than twice the 25,151.20 yuan in local universities (Sina Education 2019).

As a result, for 985/211/DWC universities, the “lock-in” cycle is a virtuous cycle, locking them in the elite stratum of China's HE. With outstanding scholars and research students, they can form research teams with better performance in research outputs in both qualitative and quantitative terms. Their advantages in student admission, staff recruitment, and funding application not only reinforce the public impression of Project 985/211/DWC universities as the more prestigious universities but also consolidate their upward trajectory in some world university rankings based on the volume of doctoral awards and research outputs. By contrast, the mechanism plays out in a vicious cycle in non-985/211/DWC universities. Without high-level research teams, it is not possible for universities to successfully apply for research projects and funding. There is thus no funding base for recruiting and training research students. This is even more so in natural science disciplines, which entail costly hardware and equipment without which research students cannot even finish their dissertations (Interview with Professor B, 2019). Then they are not able to operate doctoral/master stations, given that research funding acquisition is a pivotal indicator of the MOE's assessment and approval for operating doctoral/master stations.

The lock-in cycle also exists in the graduate employment market. The 985/211/DWC brand, the most important benchmark for the public to quickly and efficiently evaluate, differentiate, and select a university, played an important role in high school graduates' university choices. Then, the outstanding students, trained by the nation's top scholars and influenced by the premium academic atmosphere in 985/211/DWC universities, become the “state nobility” (Bourdieu 1998) after their graduation in every social arena of China, be it the sector of business, politics, technology, or academia. Despite being essentially the national government's funding projects, Project 985/211 and the DWC Project are not associated with only resource distribution. The 985/211 brand *per se* becomes an important form of symbolic capital and a yardstick of performance adopted by employers during recruitment. Project 985/211/DWC university graduates are given the highest preference by employers, including both public and private employers. On the recruitment advertisement of nearly all decent institutions, being a “985/211/DWC university graduate” is explicitly listed as one of the most important prerequisites for shortlisting. Similarly,

985/211/DWC university graduates are also an important criterion in the proliferating “talent plans” initiated by Chinese local governments, which confer handsome subsidies to attract graduates of Project 985/211/DWC universities to work and settle in their jurisdictions. In addition, the renowned and extensive alumni networks of Project 985/211/DWC universities also provide important help for their university graduates in job hunting. Top universities accepted hundreds of millions in donations from alumni networks every year, an alternative source for education funding. Their success in the employment market and society also constitutes an important indicator for mainstream university rankings, such as the indicator of “employer reputation” in QS rankings. In turn, university rankings and reputation will further affect student admission, reinforcing the lock-in cycle.

New Stratification and Mobility of China’s Elite Universities in the DWC Era

Despite the reproduction of the distinction between elite and non-elite at the overall level of China’s HE landscape, there are three new features of university stratification in the DWC era: the DWC Project is reshaping the internal stratification among the elite cohort in three aspects: privileged identities are becoming volatile and are significantly affected by regional economic disparities; university stratification in the DWC era is increasingly discipline-based rather than university-based, and market-based stratification is breaking the lock-in cycle and posing challenges to the state-designated hierarchy.

First, the internal stratification of elite universities is being reshaped when the erstwhile fixed privileged status of some universities is becoming more volatile, and state-designated hierarchies are increasingly affected by market mechanisms. Both competitions between universities and between local governments have been activated. Local government leaders are eager to support elite universities within their territories to be included in the DWC Project because such inclusion is regarded as an important political achievement (Interview with Professor A, 2020). Against this backdrop, elite universities located in China’s less-developed provinces are facing downward mobility, while those located in more economically advanced provinces or municipalities are experiencing upward mobility. In Project 985/211, the list of selected universities was fixed and static. The selected universities did not have to compete for project funding because a fixed amount of funding would be granted to them regardless of their performance. However, in the first round of the DWC Project, three former Project 985 universities with poor performance in the state’s evaluation, i.e. Northeastern University, Hunan University, and Northwest A&F University, were classified as Category B WCUs, while other Project 985 universities were identified as Category A WCUs. Without adequate financial support from the local government, the development of these three Category B WCUs had lagged behind other Project 985 universities. In the MOE’s discipline evaluation in 2016, Northwest A&F University only had one discipline, forestry science, that received an A band rating. Its performance was worse than that of many WCD universities. Classifying these three universities as Category B WCUs was a warning for both

these three universities and their counterparts in the DWC Project. It was a signal that their fate of being selected for the next round of DWC would be at stake if they did not make sufficient changes to catch up. Although these three universities remain in the DWC Project in its second round, they risk moving downward as their budget revenues were all below 5 billion yuan, less than most other WCUs.

By contrast, elite universities located in economically advanced regions are witnessing upward mobility. Universities located in the Pearl River Delta, one of China's richest regions, testify to this trend. For Project 985/211, only four of the region's universities were its members. Yet, the region now has eight universities included in the DWC Project. Among the seven universities newly added to the DWC Project in 2022, three are from the region. The recent development of Sun Yat-sen University (SYSU) has shown the importance of support from a rich local government. The recent elevation of SYSU's position in popular world university ranking league tables stands out among China's elite universities. In 2016 and 2017, 131 million and 400 million yuan in funding, respectively, were granted to SYSU by the Guangdong provincial government to compete for the WCU designation. With the local government's support, SYSU's budget revenue rocketed from 6.61 billion in 2015 to 17.52 billion in 2019, ranking fourth among DWC universities. This achievement helped finance the university's development and was recognized by some world university rankings. Moreover, SYSU benefitted from its alliance with the Shenzhen government, a municipal government with strong fiscal capability. In November 2019, the Shenzhen government offered SYSU more than 30 billion yuan to construct "a world-class university campus" in Shenzhen. This cooperation suited the strategic needs of both. With ten affiliated hospitals, SYSU is strong in medical sciences but weak in engineering. Meanwhile, Shenzhen has great advantages in innovation and high-tech industries but lacks HE and medical resources, so its government has long aspired to attract prestigious universities, especially those with outstanding medical schools, to establish their branches in the city. For SYSU, collaborating with a city with strong financial capability and an innovative atmosphere is of great importance for its advancement in the engineering field. As a result, SYSU's Shenzhen Campus is designed to have eight faculties in medical sciences and emerging engineering fields, i.e. faculties of medicine, pharmacy, public health, aerospace, biomedicine, materials, electric communications, and artificial intelligence engineering. The development of these disciplines under Shenzhen's support is helping SYSU to surpass its counterparts to further climb up the social ladder of China's HE.

Second, the distinction between central and local universities has to some extent been undermined as the Chinese state chooses to move towards a new regime of discipline-based nurturing of world-class universities. As the MOE (2017) points out, "the accreditation criteria [of DWC university selection] will treat all universities equally without differentiating [between] central and local universities, ensuring the selection process to be equitable and fair, open and competitive". The shift of China's elite university nurturing regime from a university-based to a discipline-based one entails a larger list of universities being selected; universities do not need to perform well in all fields but can concentrate resources in a few disciplines so as to be admitted into the DWC Project. Moreover, the list of disciplines included is

adjusted every five years. As funding allocation is now discipline-based, universities compete intensely with each other to have more disciplines included in the project. At the end of the first round of the DWC Project, the MOE rated 16 disciplines in 15 universities as performing unsatisfactorily. Among the 16 disciplines, the status of “statistics” at Shanghai University of Finance and Economics and “mathematics” at Northeast Normal University, selected for the development of WCDs, were revoked and, respectively, replaced by “applied economics” and “education” in the second round of the DWC Project. Other universities involved are warned that their pertinent discipline(s) will be removed from the DWC Project if they cannot pass a re-evaluation in 2023.

Besides, the membership of the DWC Project is much wider than that of Project 985/211, meaning that the privileged status previously enjoyed by a small number of universities is extended to more local universities. All the universities that have been newly included in the two rounds of the DWC Project are local universities. Local universities included in the DWC Project had even witnessed a 36.16 per cent growth in annual budget from 2017 to 2020, faster than the 29.01 per cent in MOE-affiliated universities included in the DWC Project (Cingta 2020). In the first round of the DWC Project, the WCD scheme opened up opportunities for more local universities to compete with central universities at the disciplinary level. In the second round, the distinction between WCUs and WCD universities is abolished. As a result, the status of all the selected DWC universities become more equal, dethroning the previous distinctions between Project 985 and Project 211 universities, as well as between WCUs and WCD universities. The abolishment of these distinctions attests to the determination of the Chinese central government in tackling the problem of identity consolidation of universities produced by Project 985/211.

Third, market-based stratification, epitomized by popular world university ranking league tables, is increasingly challenging the university hierarchies designated by state administrative powers. Some universities, though excluded from Project 985/211 and the DWC Project, are put in very front places by popular world university ranking league tables. Although they are not elite universities in the state-designated hierarchy, they are increasingly recognized as such by the public. One group of them comprises the “reformist universities” which are subject to fewer constraints imposed by the regulatory framework of China’s HE governance. These universities include the South University of Science and Technology of China (SUSTC) (Stone 2011) and a dozen of Sino-foreign universities, represented by The Chinese University of Hong Kong, Shenzhen. They are given great autonomy in certain components of the lock-in cycle, such as admitting students and conferring degrees independent from the MOE’s plan and arrangement. SUSTC is recently included in the second round of the DWC Project, which testifies to its elite status shaped by market mechanisms.

A few municipality-affiliated universities in China’s economically most advanced cities are also standing out in market stratifications. Two examples are Shenzhen University and Guangzhou University, which are, respectively, supported by the governments of Shenzhen and Guangzhou. The total budget revenue for Shenzhen University and Guangzhou University in 2019 was 5 billion yuan and 2.95 billion yuan, ranking third and fourth among universities in Guangdong province,

respectively. Within Guangdong, their funding is only less than the two universities previously selected as Project 985 universities or WCUs and is much higher than the three universities previously selected as Project 211 universities or WCD universities. With abundant funding, these municipality-affiliated universities can attract many high-level scholars and afford substantial input for research. They can also recruit young scholars by setting short-term research positions to quickly increase their research output. For instance, Shenzhen University was ranked 32nd among Chinese universities in the 2021 QS rankings. It has 1424 postdoctoral researchers and 628 research fellows, almost equal to the number of teaching staff, which is 2385. In 2017, the MOE approved Shenzhen University to set up seven new doctoral programmes, increasing the number of doctoral stations from three to ten. There were 365 projects funded by the Natural Science Foundation of China, amounting to 147 million yuan, granted to Shenzhen University in 2019, the 16th highest in the country. Despite being excluded by China's state-led world-class university schemes, these universities with good performance in market-based stratification are becoming very competitive in Chinese citizens' college choices, even when compared with some DWC universities. Their emerging potential to overcome the lock-in cycle with support from local governments warrants further observation of future studies on China's HE.

Conclusion

Extending theories of social stratification and mobility from the individual to the institutional level, this study explored the institutional inequality of HE institutions in China. We argue that, as institutional inequalities preconfigure and structure class stratification and mobility at the individual level, they should not be neglected by the literature on education stratification. Reflecting on scholarly debates on the connections between NPM reforms within contexts of market-based university governance, this study examines how the state shapes the causal mechanisms of China's university stratification. Tracing the institutional changes from Project 985/211 to the DWC Project, we analyze the university stratification at two levels, i.e. the overall stratification of China's HE sector and the internal stratification of the elite cohort.

At the general level, the DWC Project is reinforcing the stratified landscape of China's HE by producing the distinction between elite and non-elite, in terms of both state hierarchy and market-based stratification. In terms of state-designated hierarchy, the DWC Project is still administratively separating a small number of Chinese universities, labelling them as elite, and targeting them for greater funding support. More importantly, this state-designated hierarchy is reproduced in market-based stratification. The mechanism of this reproduction is conceptualized as a "lock-in cycle" in this paper. This conceptual construct fleshes out the causal links between the various components that produce market-based university stratification, including student admission, staff recruitment, scientific output and evaluation, research grants/education funding, students' employment, and alumni influence. The administratively-created stratification is actualized, reproduced, and reinforced in market-based stratification through the lock-in cycle

mechanism, with privileges and resources, being monopolized by state-designated Project 985/211/DWC universities. Given its partial embrace of NPM, the Chinese state is more than a supervisory one to HE governance. Instead of merely conducting a tactical evaluation of universities as a form of procedural control, the Chinese state has continued its strict control over various components of the lock-in cycle that are fundamental to a university's capacity to improve its position in market-based stratification. Despite the marketization and decentralization reforms in the HE sector, the central government remains the dominant force in structuring and stratifying China's HE landscape. It is not only because those universities in the upper stratum have an established cumulative advantage, as observed in other contexts (Beerens 2013), but also because the reforms fail to break with a centrally controlled HE system which sustains non-market forms of resource allocation to some universities and curbs the possibility for universities to flexibly adjust their development strategies for higher competitiveness.

However, focusing on the elite cohort, one can observe that the DWC Project is reshuffling the internal stratified structure of China's elite universities. Three interrelated changes to the stratification and mobility among China's elite universities have emerged. First, contra Project 985/211, the DWC Project, embracing NPM approaches, has activated inter-university competition among the subgroup of elite universities and inter-region competition among local governments. The elite status of universities becomes more precarious, given that the fixed and permanent elite identity and status, i.e. the label of 985/211/DWC, are now becoming more volatile. The "dynamic adjustment" of membership of the DWC Project, based on periodic tactical evaluation every five years, is imposing more accountability on its member universities. Local governments are competing intensively to have more universities within their jurisdictions to be included in the DWC Project. However, the outcome is largely contingent on the varied fiscal robustness of local governments shaped by regional economic disparity. Second, the internal stratification of the elite is now more discipline-based rather than university-based. This trend, together with the "dynamic adjustment" principle of the DWC Project, is producing a better competitive environment for elite local universities as these latecomers can concentrate resources in a few disciplines to increase their chance of being included in the Project in the future. Lastly, market-based criteria of stratification, epitomized by popular world university ranking league tables, have to some extent undermined the state-dominated lock-in cycle and are reshaping and posing challenges to the state-designated hierarchy. Several universities, though not being administratively selected as members of the DWC Project, are increasingly considered by the public as better universities than many state-designated elite universities. They have a high potential to be included in the DWC Project in the future.

Admittedly, the DWC Project is still a new elite university scheme operating in its exploration stage. The evolution of this project and its impact on university stratification and mobility require continuing scholarly observation in the future.

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Declarations

Conflict of interest None.

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