

Chapter 9

Higher Education Massification in Taiwan: Equity for Whom?



I-Jung Grace Lu, Tung-liang Chiang, and Angela Yung-Chi Hou

Abstract Equity is the status in which all students, regardless of their personal and social circumstances, are given proper resources and support to achieve their educational potential. Higher education has always been a key element of social mobilization since it is considered a right that should be given to all in a world of knowledge economy. Under the influence of higher education massification, the admission rate to higher education in Taiwan has come to a peak of over 90%. Equity in accessing higher education for all students has still been challenged. In this chapter, the authors discuss the challenge of higher education equity in Taiwan by investigating who benefits from higher education massification. The chapter examines the influence of the two important policies for equity—the Multiple Entrance Program (MEP) and the Tuition and Miscellaneous Fees Exemption (TMFE)—on students’ access to higher education. The struggles and challenges that the students from lower socioeconomic backgrounds face before and after they receive higher education are identified. Nonetheless, positive findings regarding the two policies and potentials for Taiwanese higher education institutions in providing quality education for all are also presented in the chapter, which also discusses the remaining concerns and future challenges of fulfilling the goal of equity in higher education in Taiwan.

Keywords Higher education massification · Equity in higher education · Multiple Entrance Program · Tuition and Miscellaneous Fees Exemption

I.-J. G. Lu (✉)

Higher Education Evaluation, Accreditation Council of Taiwan, Taipei, Taiwan

e-mail: graciae.lu@gmail.com

T. Chiang

National Taiwan University, Taipei, Taiwan

e-mail: tlchiang@ntu.edu.tw

A. Y.-C. Hou

College of Education, National Chengchi University, Taipei, Taiwan

e-mail: yungchi@nccu.edu.tw

© Springer Nature Singapore Pte Ltd. 2021

A. Y.-C. Hou et al. (eds.), *Higher Education in Taiwan*,

Higher Education in Asia: Quality, Excellence and Governance,

https://doi.org/10.1007/978-981-15-4554-2_9

9.1 Introduction

Equity in higher education has been one of the most discussed topics since the massification of higher education began (Astin & Oseguera, 2004; Chou, 2015; Clancy & Goastellec, 2007; Dias, 2014). Theoretically, higher education massification implies that access to advanced education is provided to the mass public, whereas, in elite higher education systems, only a limited part of the populations is granted with the advanced knowledge needed to become professional (Dias, 2014; Tight, 2019; Trow, 2006). The massification of higher education should thus provide equal opportunities to students from diverse backgrounds and guarantee positive social mobility. However, access to higher education is not equal for all students.

Upon a broad review of the literature on the status of higher education massification in several OECD countries, Marginson (2016) explains that the massification of higher education may lead to a greater division between elite and disadvantaged groups due to the groups with socioeconomic advantage taking control of the higher education market. Marginson (2016) concludes that no clear connection between social mobility and higher education massification was found among these countries. Mok (2016) also suggests that in some Asian countries, such as China, Taiwan, Hong Kong, Singapore, South Korea, and Japan, the rapidly massified higher education system is one of the possible reason of rising youth-unemployment rates, which may lead to inequity for the youth population from disadvantaged backgrounds.

Halsey, Heath, and Ridge (1980) argue that the public might be either too optimistic or negative when viewing the issue of massification in higher education. The former suggested that the education opportunities greatly increased after the massification in higher education but the latter stated that massification in higher education did not narrow down the economic gap between upper and lower classes, nor did it impact social mobility significantly; still, some cases of social mobility did happen during the process (Halsey et al., 1980). The massification of higher education might thus provide a chance for social mobility, which may be explained through the theory of maximum maintained inequality (MMI) developed by Raftery and Hout (1993).

MMI refers to the situation in which cases of educational inequality will start to diminish after the demand of higher education resources by the groups with privilege and advantage is satisfied (Raftery & Hout, 1993). The theory of MMI suggests that once full access to higher education is guaranteed to the privileged groups of the population, it can then be extended to wider groups, such as students from lower socioeconomic backgrounds. Hence, if the capacity of education can fully satisfy privileged groups, the groups with disadvantages are then more likely to access higher education. That is, MMI entails that there is a satisfaction point in the demands for access to higher education among the advantaged groups.

However, Lucas (2001) challenged the concept of MMI and developed the theory of effectively maintained inequality (EMI), stating that there are no satisfaction points of access to higher education for the advantaged groups due to the fact that having access to higher education is not enough. Taking control of access to higher education may be critical, but it is certainly not the only way to control educational resources.

Once access to higher education increases and becomes common, as it occurs with the massification of higher education, taking control of the quality of higher education becomes crucial for the advantaged groups to control educational resources. As a consequence, though been given more opportunities to access higher education under the waves of massification, the disadvantaged groups may only be able to receive higher education with less quality. Educational inequality may thus still exist through the control of quality. Such control of quality education by privileged groups and the ways in which inequity is still efficiently maintained (Lucas, 2001).

9.1.1 Conceptual Framework

Adapting both MMI and EMI, the conceptual framework of this study links unequal access to higher education to unequal quality of higher education for students of higher and lower socioeconomic status, respectively. This conceptual framework explores the relation between higher education policies for equity and the accessibility to better higher education and education resources among students with lower socioeconomic backgrounds. This relation is then connected to students' outcomes in terms of academic achievements and employability (see Fig. 9.1).

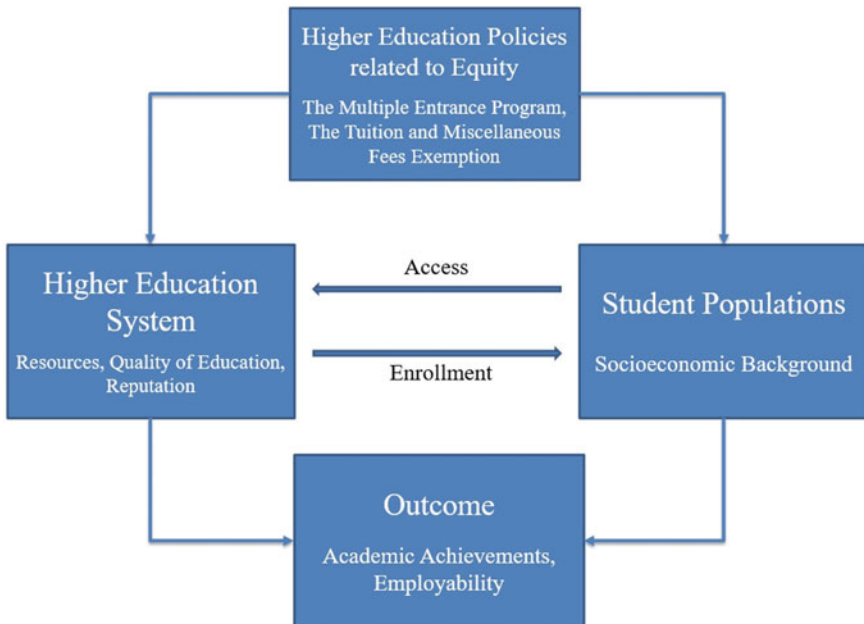


Fig. 9.1 Conceptual framework on equity and higher education massification (Source Authors)

Under this conceptual framework, this chapter aims to introduce the issues of inequity in Taiwanese higher education through an analytical literature review. Two important policies—the Multiple Entrance Program (MEP) and the Tuition and Miscellaneous Fees Exemption (TMFE), are examined in their significant relation to higher education inclusion and equity for all students in Taiwan. The influence of the policies on students' academic achievements as well as employment rate is also discussed.

Before introducing the higher education policies for equity, it is important to mention the privatization of higher education institutions (HEIs) in 1990 during the massification of higher education in Taiwan. The privatization influenced Taiwanese students' access to higher education and the quality of higher education, this representing an important background for equity policies.

9.1.2 Taiwanese Higher Education: Massification and Privatization

As mentioned in Chapter 2, after 1994, Taiwan entered a second phase in higher education expansion and massification to respond to the increasing demands for higher education and the increasing needs of the professional workforce due to changing market and economy. From 1994 to 2018, the number of institutions increased from 58 academic universities and colleges to over 150 universities. Furthermore, the net enrollment rate of students aged 18–21 increased from 26.3 to 71.2%, which translates in over 70% of the students aged 18–21 receiving higher education in 2018.

However, not all types of higher education catch on the trend of expansion in its numbers. When examining the types of universities (not including colleges), the number of national (public) universities has remained almost the same, with only a slight increase of 19 universities (from 15 in 1994 to 44 in 2019) (MOE, 2019). However, private universities, founded by private units, individuals, or organizations instead of the government, increased dramatically from 30 to 82 (see Fig. 9.2).

Private universities of technology have played a major role in the increasing number of private universities. The number of technology universities increased from only 2 in 1999 to 49 in 2019, comprising 60% of the total number of private universities. Privatization has namely occurred after 1996 massification among the HEIs, especially for universities of technology.

The dramatic increase in the number of private universities of technology has its roots in the movement for education autonomy and freedom following the lifting of martial law in 1987. The number of universities was highly controlled by the government before martial law was lifted. After the removal of the restriction on establishing universities, most of the technical colleges, which were mainly private, raced to transform their structures to universities, which had a higher reputation for quality education than junior colleges or colleges (Lin, 2002). Chu and Yang

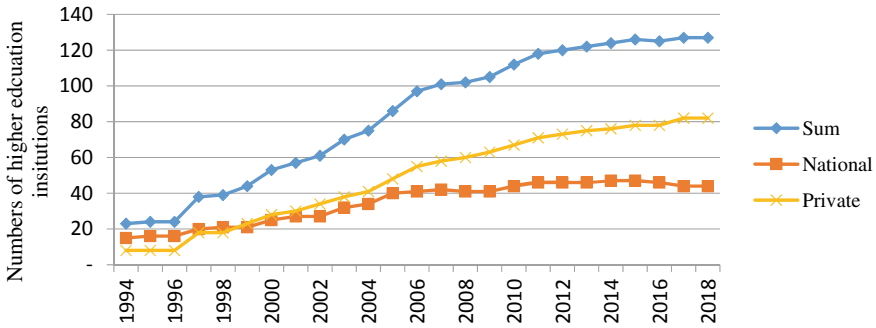


Fig. 9.2 Types of universities and higher education expansion in Taiwan (Source Authors using data from MOE [2019])

(2019) label this phenomenon as “Vocational Junior College Universitized” (p. 17). Thus, even though the overall number of universities increased after 1996 massification, the proportion of private universities, or, more precisely, private universities of technology, is among the highest.

However, transforming from a private junior college or even a college to a private university was complicated and time-consuming, as it involved the changing of the policies, the administrative structure of the institution, the curricula for the programs, and the staff and teaching resources. Thus, the vast transformation and “universitization” among private technical colleges and junior colleges has led to both poor quality of education and inequity for students who entered them (Chen, 2014). Furthermore, even though their quality is questionable, their tuition fee is twice higher than that of national universities (MOE, 2019). In other words, students who enter these HEIs not only receive a lower quality of education than that of public universities: they also pay higher tuition fees than those who enter public universities.

On the contrary, students who enter public universities are ensured with better resources, higher academic reputation, and more affordable higher education (Legislative Yuan, 2011, p. 373). Consequently, even after the massification of higher education has reached the enrollment rate of 71.2%, most Taiwanese students strive to enter public universities (Liu, 2019). Therefore, the key equity issue in higher education in Taiwan is: who managing to enter public university?

9.2 Higher Education Policies Related to Equity

Multiple Entrance Program (MEP) and Tuition and Miscellaneous Fees Exemption (TMFE) are two important policies on the equal reception of higher education in Taiwan. Both policies influence students’ direct and indirect access to higher education as well as the outcomes of higher education. The following section introduces both MEP and TMFE policies.

9.2.1 The Multiple Entrance Program (MEP)

To provide aptitude assessment and suitable pathways to students based on their character, skills, and interests, the MOE canceled the Joint Entrance Examination, whose sole access criterion was only the examination grades. The MOE then announced the MEP in 2002. Under the spirit of educational equity and diversification, MEP hopes to provide multiple pathways for all students to select from in order to enter the higher education institutions (HEIs) they aspire to.

The MEP is divided into two to three stages. The first stage is the General Scholastic Ability Test (GSAT). According to the University Act, Article 23, student graduated from either public or accredited private senior secondary schools or equivalent shall be entitled to study for a bachelor's degree. All students who hope to enter universities and colleges need to take the GSAT, to verify whether students own the fundamental knowledge and skills of their senior high school programs. After taking the GSAT, students enter the second stage of MEP in which they are given three pathways to apply for their preferred HEIs after receiving the GSAT score: the Stars Program, the personal application, and the admission by the Advanced Subjects Test (AST) score (see Fig. 9.3).

To join the Stars Program, the students need to be recommended by their high schools to the bachelor's program they wish to apply. After receiving the recommendation, the universities or colleges decide whether to provide the admission offers to the students based on their GSAT score or a face-to-face interview. The Stars Program only appeared in 2007 to balance the regional development and include more students from low-income township to better performing universities.

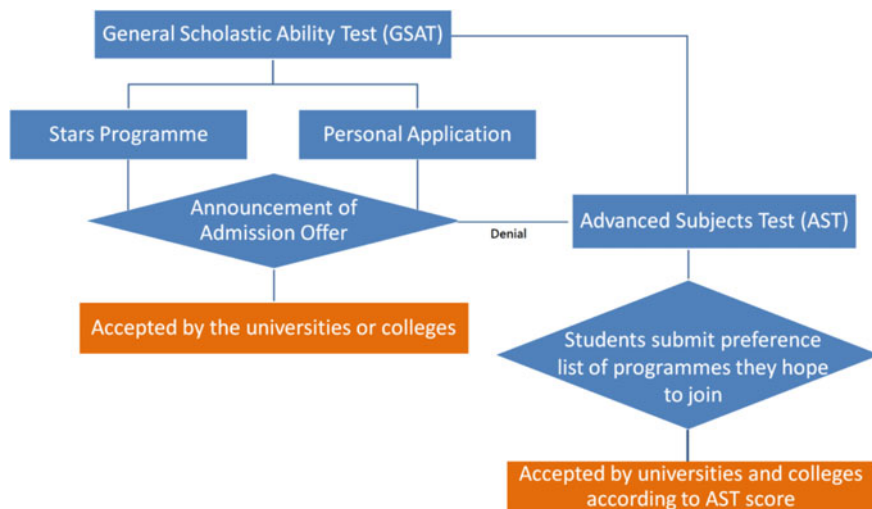


Fig. 9.3 Admission process and pathways to higher education (Source Authors using data from MOE [2019])

The process of personal application is similar to that of the Stars Program; however, all applications and recommendations are organized by the students individually. Students who are accepted either through the Stars Program or the personal application do not need to participate in the third stage of the MEP. Whereas those who do not select either the Stars Program or the personal application and those who fail either or both applications enter the third stage of the MEP—the AST.

The AST focuses on a student’s advanced knowledge of specific subjects and readiness to study in specific academic programs. After students finish the AST exam, they need to submit a preference list of the programs they wish to join according to their AST score. All universities and colleges then announce their admission result through the Joint Board of College Recruitment Commission or the official website of each institution (see Fig. 9.3 for the admission process).

All admission processes need to follow the principles of equity, justice, and transparency. Regulations on methods, the quota of recruitment, review of grades, treatment of students’ appeals, and other proceedings shall be formulated by the university, college, or by the Joint Board of College Recruitment Commission, and be reported to the MOE for approval before implementation. All rules, including the penalties of violation, GSAT, AST, and other entrance examinations carried out by universities or colleges are publicly specified in the College Admission Guidelines and the websites of each higher education institution.

Even though the main purpose of MEP is to provide aptitude assessment and diverse pathways to students, MEP highly influences equity in accessing higher education for students from different backgrounds (Chang & Lin, 2015; Chin, 2004; Yap, 2018). Thus, in many studies, MEP has been identified as an important policy influencing the level of equity for students who have entered public higher education after the massification process.

9.2.2 Tuition and Miscellaneous Fees Exemption (TMFE)

Financial support policies for students with low socioeconomic backgrounds are also carried out by the MOE to help them access HEIs. These policies are divided into two groups: the TMFE and scholarships. The TMFE is the main instrument to promote equity in higher education for students with low socioeconomic backgrounds. For example, in the Regulations for Upper Secondary and Tertiary Education Tuition and Miscellaneous Fees Exemption for Student with Low and Middle-Low-Income Family, all students who are from middle-low and low-income families are given the right to reduce their tuition fees partially or fully when entering all levels of education, including higher education.

There are additional TMFE policies for other groups of students with disadvantaged backgrounds. These TMFE policies include:

- Regulations for Tertiary Education Tuition and Miscellaneous Fees Exemption for Indigenous Students

- Regulations for Tuition Fee Exemption for Students with Physical and Mental Disabilities and Children of Parents with Physical and Mental Disabilities
- Regulations for Ensuring the Academic Progression and Government Sponsorship for Overseas Study for Indigenous Students.

Besides, the universities and other higher education institutions are also given the autonomy to set up additional scholarships for these target equity groups. This provides more opportunities for the students from a disadvantaged background to be enrolled in quality HEIs.

However, one may wonder whether these policies and support suffice or not. The chapter thus sets out to focus on issues: (1) who goes to public universities; (2) whether students with low socioeconomic backgrounds are given equal or more opportunities to study in public universities.

9.3 Who Goes to Public Universities?

As mentioned in the previous section about higher education privatization, in Taiwan, entering a public university has been one of the top priority for students, as public universities are more likely to provide quality education and are much more affordable than private universities. This section examines the issue of who enters the public universities under the influence of the two policies—the MEP and TMFE—which the MOE carried out to enhance equity in the access to quality higher education for students with disadvantages.

9.3.1 *Socioeconomic Differentials in University Enrollment Rates*

Under the influence of massification since the 1990s, the university net enrollment rate increased from 29.07% in 1996 to 71.03% in 2018 (MOE, 2019). Chan (2014) argues that the relative gap between the net enrollment rate of students from the lowest income backgrounds and the highest income backgrounds still slightly increased from 17.4% in 1996 to 25.2% in 2011. However, between 2011 and 2017, the relative gap did not increase but fluctuated (see Fig. 9.4). In 2014, the gap came to the lowest point of 13.9% but climbed back to 22% in 2017. This indicates that even though the overall situation of higher education accessibility has improved for all students after higher education massification, the relative gap between the enrollment rate of the richest and poorest has not narrowed. The fluctuation of the relative gap may also indicate that there may be other factors that influence the stratification of access to education between the two groups.

It is also important to note that the net enrollment rate between the richest, the second, and the third-highest of the income background has been more and more similar over the years (see Fig. 9.5). This finding supports Kuan, Peng, and Choi's

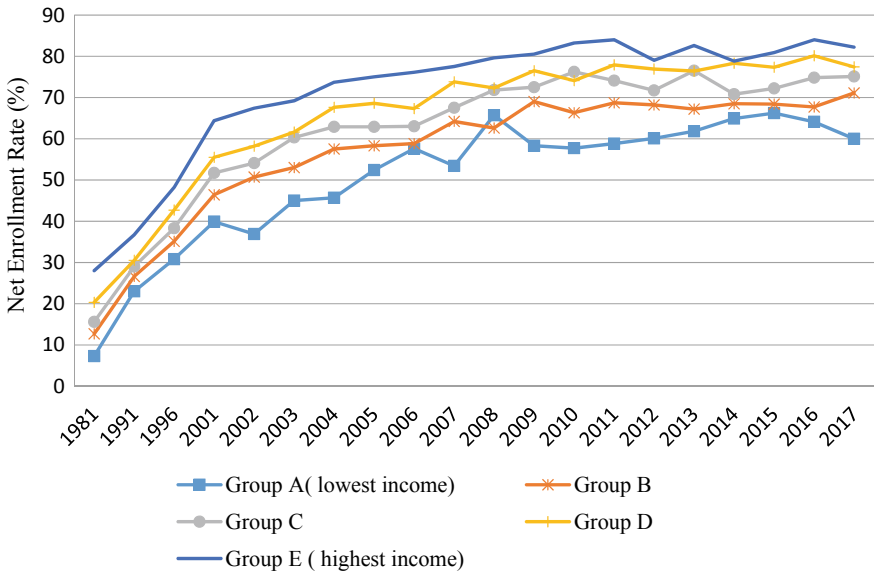


Fig. 9.4 Family income and expenditure of net enrollment rate of the age group 18–23 (Source Authors using data from MOE [2019])

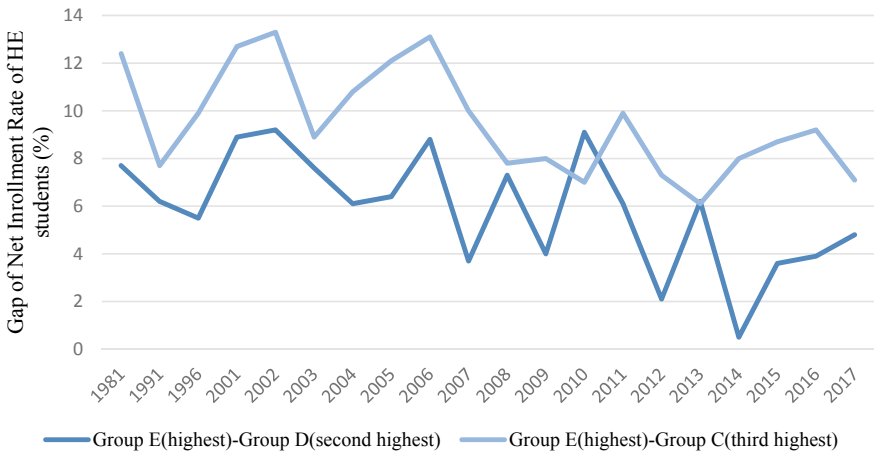


Fig. 9.5 Gap between the highest group, the second-highest, and the third-highest (Source Authors using data from MOE [2019])

(2019) research that reveals that society’s “compliers”—namely, students from middle-income families—have benefited from the massification of higher education. Kuan et al. (2019) also indicate that compliers are narrowing up their distance with the richest in terms of accessing higher education and occupations.

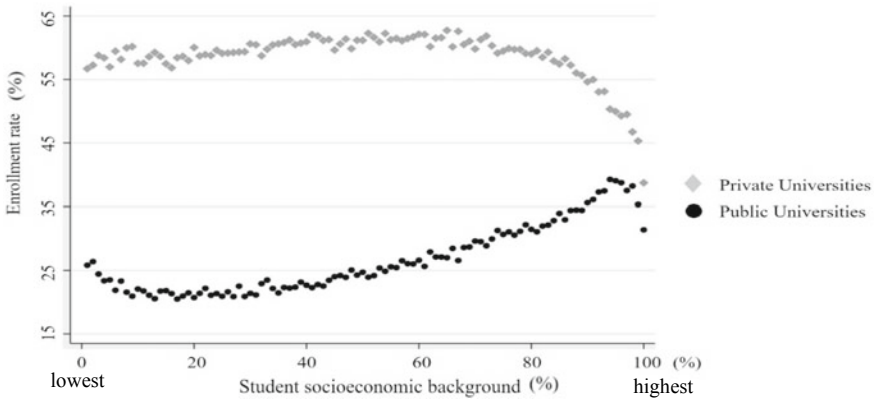


Fig. 9.6 Student income background and the relation with public and private universities. The enrollment rate equals the enrollment number between 2010 and 2014 divided by the total childbirth number between 1993 and 1995 (Source Shen & Lin, 2018)

As for the types of universities, students with lower-income backgrounds have a higher percentage of entering private universities, according to Shen and Lin (2018). As shown in Fig. 9.6, if divided the student socioeconomic background into five groups from the lowest 20% the total population to student group of the highest 20% of the total student population in Taiwan, students from the lowest group of socioeconomic background are 10% higher in enrollment rate at private universities than student group with the highest socioeconomic background.

Moreover, Shen and Lin (2018) pointed out that only around 10% of the students from the highest socioeconomic group entered universities of technology, against 40% of the students from the lowest group of the socioeconomic background (see Fig. 9.7).

When it comes to the top 10 universities in Taiwan, the difference between the proportions of the richest and poorest student population becomes even greater (Shen & Lin, 2018; Yap, 2018). According to Shen and Lin (2018), universities that are ranked highly in the world rankings and those with more abundant resources are more likely to have students from the highest socioeconomic backgrounds than universities with lower ranking and funding. Furthermore, research examining the income of townships where National Taiwan University's (NTU) students reside shows that a very high percentage of NTU's students come from high-income municipalities and elite high schools (Luoh, 2018). Though township income and elite high schools do not directly connect to the socioeconomic background of a student, research by Luoh (2018) indicates the significant connection of a student's background and their enrollment in elite universities.

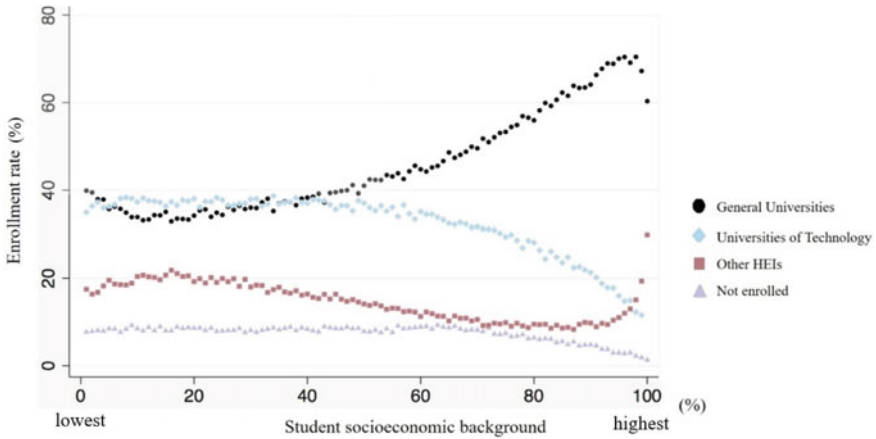


Fig. 9.7 Student income background and the relation with different types of universities (Source Shen & Lin, 2018)

9.3.2 MEP and Enrollment Rates in Different HEIs

MEP, as aforementioned, is one of the main strategies to promote the equity of access to higher education. It provides three main pathways: Stars program, personal application, and SAT. However, after MEP was implemented, several studies criticized it for causing disadvantages to students with lower-income backgrounds or students of parents with lower education achievements (Chang & Lin, 2015; Chin, 2004; Chiu, 2009). Specifically, applicants need more resources and time to prepare the documents for the application and the interview. Students from lower-income families or disadvantaged backgrounds may find it more challenging to prepare for the application process than for entrance exams (Chang & Lin, 2015; Chin, 2004). As a result, there were waves of protest by the parent groups to ask MOE to restore the old entrance exam system (Fen, 2015). In response, the MOE released a report in 2015 arguing that through the MEP and the TMFE policies, students from lower-income families were more likely to receive higher education. The 2015 document also reported a growth in students’ enrollments at the national top 10 universities (MOE, 2015). Lee and Lien’s (2016) study on the impacts of MEP on students from National Chengchi University also indicates that MEP increases the opportunities for students from disadvantaged backgrounds and states that MEP does not specifically benefit students from higher-income families.

Though the MEP does help students from a lower-income background in accessing a better public university, this positive influence mainly appears in the Stars Program, as Yap (2018) suggests, due to the assessment mechanism. Applicants for the Stars program are students who are recommended by high schools. This recommendation, which is merely based on school performance, grades, and personal features (such as school behavior and community volunteering credits), provides seemingly equal

opportunities for all students in school. Echoing Yap's (2018) research, Luoh (2018) also found out that the Stars Program valorizes the diversity of students' locality and reduces both township income differences and the concentration of students from particular high schools, such as elite high schools.

The other two pathways—personal application and AST—may lead to a greater disadvantage for students with lower-income backgrounds in accessing higher education and even make their situation worse (Yap, 2018). Students who go for personal applications tend to be students of higher socioeconomic status, and their parents, most likely, come from higher education backgrounds. These students are also more likely to be accepted in public universities due to cultural influence from their parents, which may enable them to perform suitable behaviors, prepare decent presentations and projects, and speak the language which is considered as proper by the university professors who interview them or examine their work (Yap, 2018). These advantages increase the students' chances of being accepted into the program. Conversely, students with parents of lower socioeconomic and educational backgrounds are less likely to be accepted through the personal application process due to their performance during the interview because their interaction and communication skills may be influenced by their family's cultural and living environments, which are less similar to the professors' (Yap, 2018).

Even though most of the studies suggest that the Stars Program helps create more opportunity for students from lower socioeconomic background to enter higher education, some of the studies still point out the potential issues of Stars Program. For example, Chiu (2018) argues that the positive influence of the Stars Program on increasing opportunities for students from lower socioeconomic backgrounds may not be as simple and positive as it seems. Chiu (2018) examines students from nine community public high schools and 16 struggling private high schools who later entered medical departments in elite universities. Results reveal that the socioeconomic status remains a key factor for students to enter elite programs and universities. Chiu (2018) suggests that the Stars Program seems to include more students of lower socioeconomic status into better universities. However, when examining the actual socioeconomic status of these students, most of them come from high-income backgrounds regardless of their high school being a struggling private high school. Therefore, even though the Stars Program may include more students from high schools of lower socioeconomic communities, the program may still only truly benefit the rich of such communities rather than the poor.

Interestingly, in terms of the number of applications for each pathway, the number of personal applications increased dramatically from around 10% in 2002 to over 43% of the total students in 2019 (see Fig. 9.8). The number of students going for personal applications has even surpassed the number of students taking AST since 2016. On the other hand, the percentage of students taking the Stars Program has been fluctuating since 2002. It has increased from around 6% of the total student number of taking entering higher education in 2002 to more than 13% in 2018 after a small decrease in 2017 (MOE, 2019). More and more students may thus be gaining advantages in applying through personal applications, especially the students from high- or middle-income families. The number of students who enter university through the

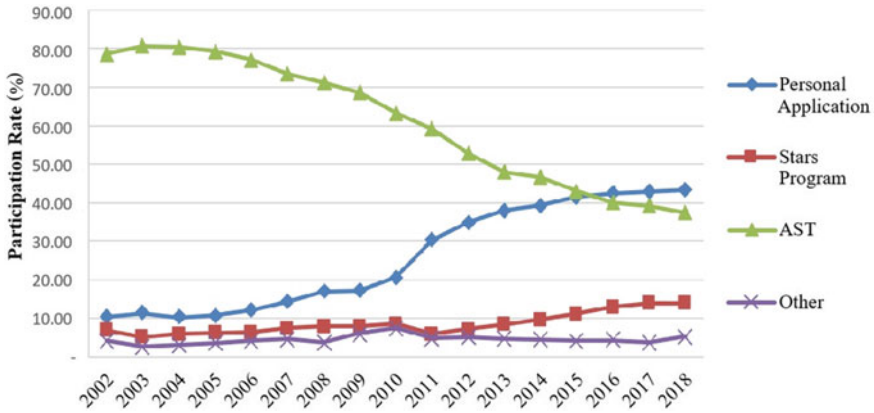


Fig. 9.8 MEP participation rate from 2002 to 2018 (Note The participation rate of each pathway equals the participants’ number of each pathway divided by the total number of MEP participants of the year. The Stars Program only started from 2007. Before 2007, there were school’s recommendations) (Source Authors adapted from MOE [2019])

Stars Program has remained steady over the years, and it may be highly influenced by other factors, such as policies, instead of the socioeconomic background of the students.

9.3.3 The Tuition and Miscellaneous Fees Exemption (TMFE) and Enrollment Rates by Type of Higher Education Institutions

Students from disadvantaged backgrounds are found to be more likely to enter private universities or colleges of technology. According to Lin’s (2017) research on students who apply for the TFME within different types of HEIs, the percentage of students from disadvantaged backgrounds in the private universities or colleges of technology is twice higher than that of public universities (see Table 9.1). Moreover, when specifically comparing private technical colleges and the top 12 universities, the proportion of students applying for TFME in private technical colleges (24.02%) is triple, with only 7% applying for the 12 top universities.

Li, Ma, and Li (2018) also indicate the students’ application for TFEM and scholarships is significantly influenced by the types of HEIs, including public universities, private universities, and universities and colleges of technology ($p < 0.001$). Through multiple comparisons, the result shows that students who study in private universities and colleges of technology are more likely to apply for TFEM or scholarships than students who study in general private universities (see Table 9.2). The research of Li et al. (2018) further indicates that even within private universities, students who study in a private university or college of technology are more likely to be students from

Table 9.1 Percentage of students applicants of TMFE in different types of HEIs

Types of HEI	(1) Number of fees exemption applicants	(2) Number of students who received scholarships for students from disadvantaged backgrounds	(A) Total number of students from disadvantaged background with financial support (A) = (1) + (2)	(B) Total number of students	(A) ÷ (B) * 100 = %
Public University	18,506	8,604	27,110	305,479	8.87
Private University	26,390	17,457	43,847	375,532	11.68
Public Technical College	12,783	10,187	22,970	129,176	17.78
Private Technical College	71,490	55,762	127,252	529,825	24.02
Public University of Technology	31,289	18,791	50,080	434,655	11.52
Private University of Technology	97,880	73,219	171,099	905,357	18.90
Top 12 HEIs ^a	7,786	4,100	11,886	169,769	7.00
Total	129,169	92,010	221,179	1,340,012	16.51

Note ^aTop 12 HEIs includes National Taiwan University, National Tsing Hua University, National Cheng Kung University, National Central University, National Chiao Tung University, National Sun Yat-sen University, National Taiwan University of Science and Technology, China Medical University, National Yang Ming University, Chang Gung University, National Chung Hsing University, and National Taiwan Normal University according to the QS World University Ranking 2017

Source: Lin (2017)

Table 9.2 Relation between types of institutions and student applicants of TMFE

TFS	Types of HEIs				Total number of students
	Public university	Public university of technology/college	Private university	Private university of technology/college	
No Applicants	5,125	2,116	8,929	6,204	22,374
Standardized residual	1.9	0.1	3.4**	-5.5**	
Applicants	306	138	521	505	1,479
Standardized residual	-1.9	-0.1	-3.4**	5.5**	
Total number of students	5,431	2,254	9,450	6,709	23,844

Note $\chi^2(3, 23,844) = 31.110^{***}$, $**p < 0.01$, $***p < 0.001$, Based on data from Taiwan Higher Education Database, with a sample of 24,977 students from 2005–2006 school years and 156 HEIs Source Li et al. (2018)

low-income and middle-low-income families when compared to all other universities in general.

Luoh (2018), Shen and Lin (2018), and Chen and Chen (2009) argue that the public subsidy to the universities may lead to reversed income redistribution, and greater inequity may follow as the poor are paying more than the rich to receive higher education. This negative cycle of unequal access to public university echoes the hypothesis of EMI suggested by Lucas (2001), whereby inequality is in fact maintained regardless of the massification of higher education. Despite massification, the rich are still more likely to access better but cheaper resources than the students from lower-income families.

9.4 Higher Education Outcomes

Following the higher education massification in Taiwan, a bachelor’s degree has gradually become the basic requirement to enter the labor market. According to the National Employment Rate Report by the Ministry of Labour (2018), over 50% from 2016 to 2018 of the employment rate involved graduates with bachelor’s degrees or higher. Several studies also argue that Taiwan has now entered the era of “overeducation” (Lu, 2019). Higher education has thus become important to social mobility for students of lower socioeconomic status (Liu, 2019). The outcomes of higher education become essential when exploring equity and social mobility in higher education. This section sets out to explore academic achievement, employment rate, and salary relative to students of both lower and higher socioeconomic status upon graduation.

9.4.1 Academic Achievements

When examining the academic performance of students who enter HEIs through the different pathways of MEP, students who enter through the Stars Program tend to have higher academic performance than others (Liao, Chang, Wang, & Horng, 2013; Wang & Li, 2012; Yang, 2012; Yap, 2018). Interestingly, according to Yap (2018), the academic performance of students from the Stars Program is not influenced by their socioeconomic background, which may be explained by the fact that one of the access criteria is their performance in senior high schools. Thus, when these students enter HEIs, they may already have the potential to perform better than others due to their senior high school study experience, regardless of their socioeconomic background.

Concerning TMFE, its impact on academic achievements of students who receive it is positive (Hung & Chen, 2003; Liu, Tsai, & Li, 2016). Liu et al. (2016) suggest that students from lower socioeconomic backgrounds who receive higher education tend to be more hardworking and are most likely to be actively engaged in their academic work than their peers. Liu et al. (2016) argue that these students are highly motivated to complete their academic work and view higher education as an opportunity to support their family and improve their socioeconomic status once they finish their studies. Hung and Chen's (2003) research on a group of medical students also indicates that medical students from lower-income families who receive TMFE or scholarships are more hardworking than average medical students, and they tend to achieve higher academic performance.

However, several studies also found that due to the lack of financial support from their families, students from lower socioeconomic backgrounds are more likely to be distracted from their learning in order to make ends meet (Chou & Wang, 2012; Li et al., 2018; Lin, 2010). Li et al. (2018) suggest that students who study in private universities, especially private universities of technology, are more likely to struggle to pay tuition fees, apply for student loans or subsidies, and take on one or more part-time jobs. This situation of taking on several part-time jobs then limits the students' time for academic work. Moreover, most of the students who pay for their tuition fees need to spend their savings or make loans to finish their degrees from private universities. This situation leads to an even more challenging financial status for them when they graduate and creates an even more critical issue of inequity for students of lower socioeconomic status (Li et al., 2018).

9.4.2 Employment Rates and Salaries

The unemployment rate of students who graduate from universities has become higher than the average unemployment rate since 2005 (MOL, 2018). Mok (2016) argues that such a high unemployment rate among the young bachelor's degree holders might be due to the rapid expansion of higher education. The rising number of bachelor's degree holders overpasses the occupational vacancies within the labor

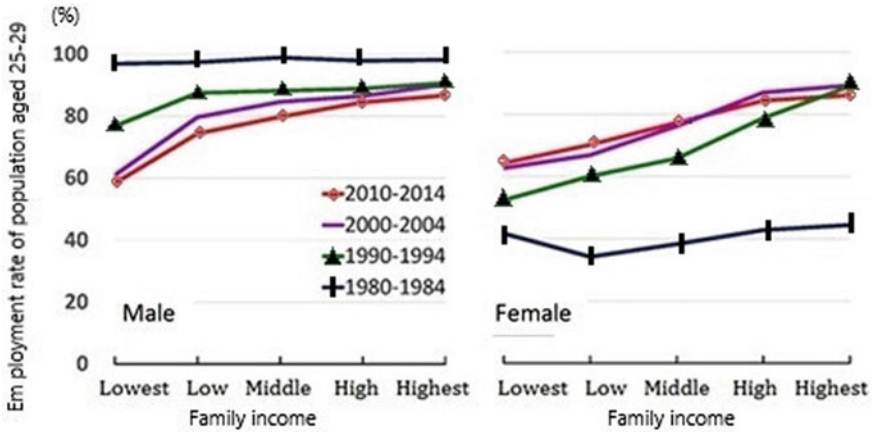


Fig. 9.9 Employment rate of the higher education graduates aged 25–29 according to gender and family income (Source Chiang and Hou [2018])

market. However, interestingly, according to Chiang and Hou (2018), by separating socioeconomic groups according to gender and comparing employment rates between men and women who received bachelor’s degrees or higher, found out that women aged 25–29 perform better than men (see Fig. 9.9). Women were found to have slightly improved their opportunities in finding jobs over the past few years and even have similar opportunities in findings jobs as men (Chiang & Hou, 2018). This increase in employment rates has been a significant positive result of higher education massification for students from lower-income backgrounds.

However, the overall situation of the employment rate for students of lower socioeconomic status still needs to be improved. Chiang and Hou (2018) state that Taiwan is still facing critical challenges in the increasing gap between families of high and low socioeconomic status in terms of employment rate.

Kuan et al. (2019) indicate that the population who attended universities due to the higher education massification—the so-called compliers—is benefiting the most from the massification in terms of career development, salary, and income. However, other groups, such as the always-takers, who will enter universities no matter the influence of massification, and the never-takers, who will never enter higher education regardless of higher education massification, are not benefiting much.

Furthermore, through the different-in-difference (DID) analysis, Kuan et al. (2019) found that the higher education massification negatively but passively impacted the always-takers through the increasing competition with the compliers for better occupational prestige and salary. As for the never-takers, who are those with the lowest socioeconomic background, they do not benefit from the massification, nor are they significantly disadvantaged by the massification.

Concerning the salary after graduating from different types of universities, Lai (2012) suggests that students who graduated from highly reputable universities

(mainly, public universities), tend to have a higher salary than students who graduated from less reputable universities, such as private technical colleges. Nevertheless, after five years of employment, the gap between the employees may disappear, and the institution the person graduated from may become irrelevant (Lai, 2012). This is due to personal skills and character being able to replace the importance of one's educational background.

Students who graduate from public universities are more likely to enter postgraduate programs than students from private technical universities and colleges (Lin, 2010). Most of the students who keep on studying for a master or doctoral degree are most likely to obtain occupations with a higher salary than those who enter the job market with a bachelor's degree due to the saturation of bachelors in the job market (Lai, 2012; Lin, 2010). Moreover, those who enter postgraduate programs are more likely to belong to a higher socioeconomic status.

9.5 Conclusion

Going back to the question of “who enters public university?”, this chapter concludes with the realization of how equity in higher education may somehow still be far from where it should be in Taiwan. The stratification between students from low and high socioeconomic backgrounds becomes even more severe when comparing the private universities of technology and elite universities. However, this chapter also shows some encouraging inputs, including how comparing to the time before MEP, students who enter university through the Stars Program are more likely to perform better than other students.

Inequity in higher education massification is not a new issue around the world, nor is it new in Taiwan. For equity to work, the policy not only needs to tackle the issue of access to higher education but also the quality of higher education. The Taiwanese government may need to rethink the structure of higher education and provide quality assurance to support the private universities of technology in becoming better education providers—even by taking legal action to ensure the quality of higher education by controlling the numbers of HEIs if needed. Students may also need to rethink the pathways of receiving post-secondary education: is entering university, which is mainly academic-based, necessary? Other possibilities beyond education, such as vocational training, may need to be reconsidered within educational policies to increase the competitiveness and employment rates among all students. It is possible to suggest that Taiwan is still far from fulfilling its mission of achieving equity in higher education in terms of socioeconomic imbalance. However, there are high hopes for the future.

This research is limited by factors that have not been taken into account when examining inequity in higher education, such as parents' educational background and the influence of ethnicity. Furthermore, groups of students with other disadvantages, such as students with disabilities, should be considered, and their challenges in receiving higher education should be discussed in future studies. These students may

have an entirely different experience of receiving and accessing higher education than the group of students from low socioeconomic backgrounds. This chapter, however, has laid the groundwork for future research into higher education massification and its link with privatization. Moreover, it has explored the issues of inequity under the influence of MEP and TMFE policies. This study may thus provide significant findings for future research to further understand the situation of inequality concerning both students from low socioeconomic backgrounds and the impact of privatization and massification on Taiwanese higher education.

References

- Astin, A. W., & Oseguera, L. (2004). The declining 'equity' of American Higher Education. *Review of Higher Education*, 27(3), 321–341.
- Chan, Y. (2014). A study on the equity of higher education opportunity in Taiwan. In Y. Fang & R. Tang (Eds.), *Education reform: Moving beyond the past 20 years* (教改20年:回顧與前瞻) (pp. 247–284). Taipei: Pro-Ed Publishing [in Chinese].
- Chang, Y., & Lin, T. (2015). How does the expansion of higher education reproduce class inequality? The case of Taiwan. *Taiwan Journal of Sociology of Education* (臺灣教育社會學研究), 15, 85–129 [in Chinese].
- Chen, C. C. (2014). *Why do the technical schools disappeared in Taiwan and why does the technical college universitified?* (臺灣的專科學校為何消失了, 技術學院又為何大學化了呢?). Retrieved February 5, 2020, from <https://opinion.udn.com/opinion/story/5767/101937> [in Chinese].
- Chen, L., & Chen, S. (2009). *An analysis of our universities' financial structures and what it reveals about tuition and fee policy formulation*. Presented at the Dialogue on Education Research and Education Policy International Academic Symposium, National Taiwan Normal University, Taipei.
- Chiang, T., & Hou, A. Y. (2018). Some observations on social inequality after the expansion of higher education. *Higher Education Evaluation Bi-Monthly* (評鑑雙月刊), 75, 26–28 [in Chinese].
- Chin, J. M. (2004). Better or worse: Examining the feasibility of the college multiple entrance program. *Educational Policy Forum* (教育政策論壇), 7, 59–84.
- Chiu, M.-S. (2018). Equality or quality? Using within-school ranks to admit disadvantaged medical students. *Journal of Applied Research in Higher Education*, 10(2), 140–154.
- Chiu, S. (2009). The research of the multiple entrance program. *Education E-journal Ming Chaun University* (銘傳大學教育電子期刊), 1, 83–93 [in Chinese].
- Chou C. P. (2015). Who benefits from Taiwan's mass higher education? In J. C. Shin, G. A. Postiglione, & F. Huang, (Eds.), *Mass higher education development in east Asia: Strategy, quality, and challenges*. (Chp. 14, p. 231). Singapore: Springer.
- Chou, C. P., & Wang, L. (2012). Who benefits from the massification of higher education in Taiwan? *Chinese Education and Society*, 45, 8–20.
- Chu, C., & Yang, Y. (2019). Higher education sprout project: Multi-development and the returning of Practicality. *Innovation in Higher Education Bi-monthly* (高教創新), 27, 16–19. Ministry of Education: Taipei [in Chinese].
- Clancy, P., & Goastellec G. (2007). Exploring access and equity in higher education: Policy and performance in a comparative perspective. *Higher Education Quarterly*, 61(2), 136–154.
- Dias, D. (2014). Has massification of higher education led to more equity? Clues to a reflection on the Portuguese education arena. *International Journal of Inclusive Education*, 19(2), 103–120.
- Fen, C. (2015). Parents hope to resume the joint entrance examination. Minister of Education Wu: Students have better performance through personal application. *United Daily*. Retrieved

- September 30, 2019, from http://udn.com/news/story/6913/1331655?_ga=2.76649173.1351590597.1570112833-833953691.1570112833.
- Halsey, A. H., Heath, A. F., & Ridge, J. M. (1980). *Origins and destinations: Family, class and education in modern Britain*. Oxford: Clarendon Press.
- Hung, B., & Chen, F. (2003). Factors affecting university students' auto-learning-based on the survey of medical students in China Medical University. *Journal of General Education* (通識教育), 5, 129–151 [in Chinese].
- Kuan, P., Peng, S., & Choi, S. (2019). Does a college degree still pay? A casual analysis of the impact of college expansion on earnings and occupational prestige in Taiwan. *Journal of Social Sciences and Philosophy*, 31(4), 555–559.
- Lai, W. (2012). *The wage difference of graduates from different schools after the expansion of higher education* (高教擴張之不同薪資報酬差異). Published Master's Dissertation, National Taiwan University, Taipei, Taiwan [in Chinese].
- Lee, W., & Lien, H. (2016). Investigating the equality of two-track college recruitment: Evidence from administrative data of National Chengchi University. *Academia Economic Papers* (經濟論文), 44(2), 207–250 [in Chinese].
- Legislative Yuan. (2011). *The legislative yuan gazette* (立法院公告), 100(63), 373 [in Chinese].
- Li, Y., Ma, K., & Li, Y. (2018). A study on the individual cost-sharing in higher education: An examination of fundraising of tuition and fees. *Student Affairs and Guidance Counseling* (學生事務與輔導), 57(1), 8–70 [in Chinese].
- Liao, P. A., Chang, H. H., Wang, J. H., & Horng, T. H. (2013). Do rural students really perform worse than urban students do? Empirical evidence from a university entrance program in Taiwan. *Rural Sociology*, 78(1), 109–131.
- Lin, D. (2010). The exploratory study on university graduates' further developments in Taiwan. *Taiwan Journal of Sociology of Education* (臺灣教育社會學研究), 10(1), 85–125 [in Chinese].
- Lin, F. (2017). Exploring the equity of education from the application of loan system for higher education in Taiwan (由我國高等教育就學貸款之運用探究教育公平性問題). *Journal of Kao-Tech University Humanities and Social Sciences*, 3(2), 25–39 [in Chinese].
- Lin, T. (2002). *A sociological analysis of the transformation of the technical and vocational education in Taiwan* (台灣技職教育轉型的社會學分析). Published PhD thesis, Tunghai University, Taichung, Taiwan [in Chinese].
- Liu, R., Tsai, H., & Li, Y. (2016). Campus experiences, learning outcome and assistant resources of economically underprivileged students in A Public University. *Student Affairs and Guidance Counseling* (學生事務與輔導), 55(3), 9–29 [in Chinese].
- Liu, S. (2019). Universities entrance-closer mechanism: Is marketization the Pandora box? *Taiwan Educational Review* (臺灣教育評論月刊), 8(4), 27–34 [in Chinese].
- Lu, H. (2019). *Research on education-job mismatch in Taiwan's higher education* (臺灣高等教育「學用落差」之探究) (Published PhD thesis) National Chengchi University, Taipei, Taiwan [in Chinese].
- Lucas, S. R. (2001). Effectively maintained inequality: Education transitions, track mobility, and social background effects. *American Journal of Sociology*, 106(6), 1642–1690.
- Luoh, M. (2018). Who are NTU students? (2001–2014) the effect of the multi-channel admission program. *Taiwan Economic Review* (經濟論文叢刊), 46(1), 47–95 [in Chinese].
- Marginson, S. (2016). The worldwide trend to high participation higher education: dynamics of social stratification in inclusive systems. *Higher Education*, 72(4), 413–434.
- Ministry of Education. (2015). *Report on students from low socioeconomic background entering universities through multiple entrance program in the recent years* (教育部2015_近年經濟弱勢生以多元管道進入大學之概況分析). Retrieved September 11, 2019, from <https://stats.moe.gov.tw/files/analysis/%E8%BF%91%E5%B9%B4%E7%B6%93%E6%BF%9F%E5%BC%B1%E5%8B%A2%E7%94%9F%E4%BB%A5%E5%A4%9A%E5%85%83%E7%AE%A1%E9%81%93%E9%80%B2%E5%85%A5%E5%A4%A7%E5%AD%B8%E4%B9%8B%E6%A6%82%E6%B3%81%E5%88%86%E6%9E%90.pdf> [in Chinese].

- MOE. (2019). *Main statistical tables for education of 2019*. Retrieved August 5, 2019, from http://stats.moe.gov.tw/files/ebook/Education_Statistics/108/108edu_EXCEL.htm.
- Ministry of Labour. (2018). *National employment rate report (107年15-29歲青年勞工就業狀況調查報告)*. Retrieved August 5, 2019, from <https://statdb.mol.gov.tw/html/svy07/0711all.pdf> [in Chinese].
- Mok, K. H. (2016). The quest for world-class university status: implications for sustainable development of Asian universities (Centre for Global Higher Education Working Paper Series; No. 8). London: Centre for Global Higher Education, UCL Institute of Education.
- Raftery, A. E., & Hout, R. (1993). Maximally maintained inequality: Educational stratification in Ireland. *Sociology of Education*, 66(1), 41–62.
- Shen, H., & Lin, M. (2018). *The education opportunity inequality across income in Taiwan Department of Economics (論家戶所得與資產對子女教育之影響)*. Retrieved August 10, 2019, from <http://www.econ.ntu.edu.tw/ter/new/data/new/forthcoming/106-019.pdf> [in Chinese].
- Tight, M. (2019). Mass higher education and massification. *Higher Education Policy*, 32(1), 93–108.
- Trow, M. A. (2006). Reflections on the transition from elite to mass to universal access: Forms and phases of higher education in modern societies since WWII. In P. G. Altbach (Ed.), *International handbook of higher education* (Vol. 18, pp. 243–280). New York: Springer.
- Wang, S., & Li, C. (2012). A study on the learning outcomes of students admitted through the twinkling stars program: An example from college freshmen in a top university. *Educational Policy Forum (教育政策論壇)*, 15(3), 1–39 [in Chinese].
- Yang, Y. (2012). An analysis of the academic performance of the students admitted through the star plan in Taiwan's College Entrance System. *Educational Policy Forum (教育政策論壇)*, 15(4), 63–93 [in Chinese].
- Yap, K. (2018). Does multi-channel college admission system benefit the upper middle class? *Taiwanese Journal of Sociology (臺灣社會學刊)*, 64, 171–195 [in Chinese].

I-Jung Grace Lu is an Assistant Research Fellow of Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). She is currently serving as the board director of Asia Pacific Quality Network (APQN). She received her PhD in education at University of Manchester. She is involved with several research projects, such as the analytical study on the development of the Taiwan Qualifications Framework (TWQF). She is professional in the fields of inclusive education, social networking, quality assurance and higher education.

Tung-liang Chiang is Professor and former Dean of the College of Public Health, National Taiwan University. In 1984, he received his ScD in health policy and management from the Johns Hopkins University. Professor Chiang is one of three pioneer architects of Taiwan's National Health Insurance, which was inaugurated on March 1, 1995. In 2014–2016, he served as the Executive Director of the Higher Education Evaluation and Accreditation Council of Taiwan.

Angela Yung-Chi Hou is Professor of Higher Education at National Chengchi University, Taiwan. Currently, she serves as Associate Dean of College of Education, National Chengchi University, as well as Executive Director of Higher Education Evaluation & Accreditation Council of Taiwan. She has been involved in quality assurance practices and international research for more than 15 years, including serving as Vice President of both International Network of Quality Assurance in Higher Education (INQAAHE) and Asia Pacific Quality Network (APQN). She specializes in higher education policy, quality management, internationalization, faculty development, and quality assurance of cross border higher education.