Higher Education in Asia: Quality, Excellence and Governance

Alfred M. Wu · John N. Hawkins *Editors*

Massification of Higher Education in Asia

Consequences, Policy Responses and Changing Governance

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The series attempts to incorporate the most important quality issues and the current developments in Asian nations from multi-perspectives—academics, university managers, QA bodies, governments and students into three major dimensions—quality, excellence and governance. The scope of Asian region includes four areas: East Asia, South Asia, Middle East Asia and the island Pacific nations.

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Preface

Over the past decades, higher education has been responsible for significant changes within all Asian societies. The massification of higher education has as one of its intended effects reshaping the sociopolitical landscapes of Asian societies in fundamental ways. Within this framework, the Asia Pacific Higher Education Research Partnership (APHERP) devoted its 2014 senior seminar to investigating the massification of higher education in the Asian context. The organizers raised two essential hypotheses: Hypothesis 1 assumes that increasing access through massification either actually or eventually increases inequality; Hypothesis 2 presumes that the massification of higher education nevertheless increases equity and equality *in the long run*. All chapters in this book respond to these hypotheses in some way, drawing on individual country experiences and challenges. This collection provides significant coverage of many elements related to massification by examining trends, consequences, policy responses, governance quality, equality, and equity in the Asian higher education sector, which in turn contributes to a larger debate about higher education in the twenty-first century. In addition to tackling common misconceptions, some policy implications have been generated from these studies.

The book will be of great interest to education policy-makers, higher education administrators, and practitioners in the higher education sector worldwide. As the collection tackles different layers of actors associated with the massification of higher education, it will be attractive to students of higher education institutions, higher education governance, the political economy of higher education, and other social dimensions impacted by the dynamics of higher education.

The senior seminar of the APHERP was sponsored by Centre for Greater China Studies and Department of Asian and Policy Studies of The Hong Kong Institute of Education (now The Education University of Hong Kong) and the East-West Center in the USA. Particularly, the editors would like to thank Professor Deane Neubauer for directing the senior seminar, which led to this book.

We also wish to express our gratitude to the reviewers for their helpful comments and suggestions and Mr. Lawrence Liu, Ms. Lay Peng Ang of Springer, and Ms. Olga Sazhina of the Education University of Hong Kong for assistance and the significant help they provided over the course of this 3-year book project.

Singapore — Alfred M. Wu
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Chapter 1
The Many Faces of Asia Pacific Higher Education in the Era of Massification

John N. Hawkins, Ka Ho Mok and Deane Neubauer

Higher education throughout much of the world, and certainly across the diverse Asia Pacific region, has been engaged in one or another aspect of the massification phase (Trow 2005) for the past three or four decades. From an outside perspective, it may appear that the general form and dynamics of this massification movement are quite similar, irrespective of local country differences. On closer inspection, however, the process of massification is in fact highly complex and differentiated, taking a variety of shapes and pathways.

The purpose of this chapter is to identify some of these differentiations, and thereby suggest possible paths of inquiry that readers may wish to pursue. In doing so, we will explore a set of apparent contradictions concerning the varying structures and dynamics of massification throughout the region; these contradictions take the form of two basic contending hypotheses arrayed around the common assertion that massification is generally thought of as (1) both a process and a result, that (2) increases access, thereby also increasing the relative extent of equity and equality. Depending on which of these contending hypotheses one chooses to follow, massification also poses unique challenges with respect to issues related to higher education (HE) governance and leadership.

Hypothesis One states a challenge to the underlying assumptions of massification, namely, that increasing access through massification either actually or eventually increases inequality. One implication of this argument, should it be correct, is that it is therefore more honest (and perhaps practical?) to stay within and maintain an elite system of higher education, backed up by appropriate vocational and technical education that is aligned with the (rapidly changing) workplace.

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What might be the bases for holding this hypothesis to be correct?

To begin, it can be argued that massification produces institutions and students of vastly different qualities; this leads to differences that extend throughout the system, affecting the quality of facilities; the organization, provision, and structures of higher education institutes (HEIs) themselves; student preparedness; and increases in dropout rates. Those holding this view assert that the gulf between HEIs at the "top" and "bottom" extremes of the quality distribution (however that is determined) has widened worldwide, year after year, as massification has progressed.

What might be some of the evidence to support this proposition?

First, it can be observed that enrolment in HE has increased by over 50% in the last decade and in various parts of Asia by a much greater figure (Calderon 2012).

Second, the majority of the enrolment growth in coming years will be in two countries—China and India—both of which have massive populations, and which are each also characterized by significant patterns of income and social inequality. These inequalities affect not only their urban populations, but are particularly acute between urban and rural populations.

Third, it follows that, as the diversity of student populations expands, students may increasingly come from social classes and income levels with little preparation for HE. This raises the propensity for dropping out and/or attending low-quality and sometimes exploitative HEIs that spring up to "serve" these underprepared populations, and whose continued existence is often rationalized by their ability to maintain "head counts" irrespective of educational quality (Bettinger and Long 2009).

Fourth, within "conventional" HEIs, these students are more "expensive" because they require tutoring, counseling, and a variety of social services—more than "elite" students might. As participants within the higher education process, they simply do not have the academic background or ability that those within the historical elite system are presumed to possess. Further, they often suffer when compared with those in HEIs within the current system—HEIs that have come forward with massification, which often continue to be viewed as the "best" HEIs, and which, for a variety of reasons, continue to have access to the best or better students within the overall HEI pool.

Fifth, building up overall systemic capacity is also expensive and time-consuming, thus it is often the case that the expansion of HEIs cannot keep up with demand. Facilities become substandard—often because "money" for them is concentrated on the "front end" for initial construction, with little thought or provision for ongoing maintenance. This, in turn, leads to a situation in which the conditions for studying are inferior—overcrowded, characterized by inadequate libraries, lacking in information and communication technologies, and resulting in a limited range of curricula. In most of these situations, few or no resources are made available for the continued education and training of faculty, which in turn quickly leads to the perpetuation of outdated curricula, and other HEI challenges (Trow 1973; Altbach 2010).

Sixth, the academic professionals needed to staff these expanded facilities tend to be less qualified, lower paid, overworked, burdened with heavy teaching loads that include large classes, and having little time or energy to provide personal attention to students. Indeed, in many contemporary massified higher education systems in the Asia Pacific region, faculty members at "lesser regarded" institutions are often forced to hold positions at multiple universities, a situation that leads to a downward cascade of professional preparation, in terms of both timeliness of knowledge and energy to teach effectively. What results is, in effect, a "beggaring" of this fraction of academic professionals (Chapman 2009).

Seventh, massification often concentrates expansion in the private sector, which can lead to the proliferation of institutions that are underfunded and exploitative, and that tend to function basically as "demand absorbing" institutions, almost irrespective of the quality of the education being produced (Jiang 2011).

Eighth, high non-completion rates tend to grow with massification—especially as it moves toward Trow's final stage of "universalization," in which higher education is deemed necessary for all. Even U.S. data indicate that it takes longer to graduate (on average 6.3 years for a BA), with many students being either unwilling or unable (often for financial reasons) to continue, and simply dropping out. In many countries, the practice is to simply fail large proportions of students, while at the same time bringing in ever more, to meet either income needs or to fulfill government-mandated quotas (Smit 2012).

Ninth, massification in some instances takes place absent an increase in either the quality of the secondary system, or adequate quality regimes, leading to the admission of students unprepared for HE. When massification of higher education takes place in the absence of a corresponding "reform" or "restructuring" of secondary education, the distortions of the latter are telegraphed directly into the former. The result is that many institutions (as suggested above) may end up at the periphery of the newly emergent system, with students fundamentally unprepared to succeed at meeting the demands of higher education. Such institutions, however, are characteristically likely to be evaluated in terms of metrics common to the system as a whole, and thus enormous pressures are generated and transmitted throughout the system to sustain what are deemed to be suitable levels of graduation. These tendencies are underscored and multiplied when the processes of massification are accelerated. The most common indicators of the costs of such dynamics are often evident in professional fields in which graduates are required to take national qualification examinations. In many cases—the Philippines being one example—a significant proportion of graduates, often exceeding 50%, fail national qualification examinations in the fields of their degrees.

One important result of these dynamics is that the combination of factors described above often leads to a situation in which efforts to create, assure, and maintain quality by agencies, either governmental or non-governmental, proves to be an impossible challenge.[1] Determining the quality of new HEIs entering the system is a challenge, but one no less daunting than that which is encountered when seeking to create and

[1] On the quality dilemma amid the massification of higher education, see Hawkins et al. (2018).

implement quality routines that can lead to sensible and verifiable data for such a wide range of institutions. One result is that "quality assurance" exercises are often empty and of dubious value.

Another important result is that elite institutions continue to dominate these differentiated systems—they are characterized by having the highest average socioeconomic status (SES) students, the best faculties, the highest completion rates, and the largest share of the public higher education budget, among other advantages. In contrast, the lower level HEIs attract students who are less competitive in examinations, have lower (or the lowest) scores, have less income, and are generally ill-prepared for a "true" higher education.

Furthermore, the available data are unclear on whether or not a degree from one of the lesser institutions actually increases life opportunities or income, although some U.S. data suggest that overall, a degree from any institution of higher learning does increase lifelong income opportunities (Baum 2014). On the other hand, some Korean and Japanese data show that a degree from a lesser institution does not do so, but instead acts to perpetuate inequalities. Studies by Lee (2014) show that in both Japan and Korea, despite both massification and declining fertility, SES stratification in HE remains persistent over time. The data indicate that in terms of academic preparedness, financial affordability, and investment attractiveness, massification has not ameliorated SES stratification, but rather there has been a low impact on changing SES, with increased financial burdens on low-SES students, and high between-school variance in a vertically stratified HE system.

Another aspect of massification has been the actual scale on which many of these unintended consequences have arisen. In *Higher Education News*, Zha (2011a) has detailed many such consequences as they affect China, noting that while a number of these phenomena have taken place outside China as well, within China they have occurred on a massive scale, complete with numerous protests and other manifestations of disorder, arising in large part from the unexpected and unanticipated high cost of higher education and its surprisingly low returns for students (Facts and Details 2013).

To this must be added, not only for China, but increasingly for much of the developed world (e.g., Spain, France, and Britain), the astonishing increase in the number of unemployed graduates. For Zha (2011a), this phenomenon stands as evidence that, for China at least, its "current social, economic and political structures are not ready to absorb them" (2011, 2). A conclusion increasingly evident to many commentators is that the well-known and remarked-upon "alignment crisis" in higher education, which is typified by the inability of graduates to find employment, is a fundamental structural feature of those economies in which massification is the characteristic form of higher educational pursuit. This is compounded by data that reveal that there are downsides in China for both equity and equality in HE participation, which can in turn affect students' lifetime opportunity potentials. Surveys continue to show that high SES students are favored for access to the best and most selective universities, and they receive more financial aid than lower SES students in lesser institutions, who, despite massification, have fewer lifetime opportunities as a result (Zha 2011b).

Hypothesis Two, which can be seen as a competing or alternative hypothesis, states the view that even conceding all or most of the above problems and issues, a massified system nevertheless increases "long-term" equity and equality. Part of the apparent conflict between the two views can be explained by the reality that it just might take longer to achieve this relative social state than we thought.

This proposition points to the following kinds of evidence that may be adduced from what in most instances must be viewed as emerging or emergent forms of massified higher education.

First, in an argument contrary to that made above, it is held that massification sets a tone for all further education and raises the overall talent pool of emerging countries. In this framing, massification acts as a kind of "demand pull" that transmits signals of quality and aspiration (often drawn from global comparisons) that are held to "chip away" at the parochial and more narrowly conceived educational parameters and standards of nationalist systems prior to the onset of the massification stage (Dill 2007).

Second, this framework holds that eventually it will pay to attend HE and obtain a degree. This assertion accords with recent studies in the United States that find, when surveying all members of the labor force and comparing them with a high school diploma, those with a bachelor's degree earn about 170% more while those with an advanced degree earn about 225% more (Baum 2014). Whether it is the case that this is an economic principle, or rather that the U.S. represents some sort of outlier, remains to be demonstrated. Recent reports from China's newly massified system would suggest that HE recruitment is down in almost every province as parents and students opt out of attending HE, skeptical of the benefits they might accrue (Tremors in China 2014).

Third, it is seemingly an invariable requirement that governments must increase regulation and monitoring of the new, largely private, institutions that contribute to massification, in order to gradually increase their caliber through rigorous Quality Assurance (QA) and accreditation processes (Dill 2007).

Fourth, in order for massification to result in a steady pattern of improved access accompanied by requisite quality, there must be greater transparency. Experience throughout the world continually attests to this central proposition of higher education quality assurance—namely, that whether recognized or not, higher education both nationally and internationally constitutes a form of market in which various forms of symbolic currency are given value and exchanged. Transparency is an essential requirement for the effective exchange of information in such a market, one that allows "consumers" of the higher education "product" (however defined) to make informed decisions. This has become a major task of national quality assurance activities and figures importantly in both the emergent ranking system (as one form of generating such transparency) and nascent efforts to create viable standards for international/global quality comparisons (Marginson and Sawir 2005).

Fifth, for the desired qualitative improvement and overall beneficial aspects of massification to occur, there must be government action to provide for cost-sharing and financial aid, and to help those low-SES students with abilities gain access to the top institutions, thus increasing that pool of talent. Where such action is absent, as

indicated in Hypothesis One above, higher education systems will inevitably operate to both perpetuate existing inequalities and to create new ones. This is a particularly important point around which to gather data and provide context, inasmuch as the "model" pattern of government involvement in higher education is to provide significant support in earlier stages of massification (along with the loosening of government regulation for private institutions), but in later stages, spurred by elements of neoliberalism, to restrict government support. Current concerns in the U.S. focus on how declining support for higher education may reduce middle-class achievement for graduates (Quinterno and Orozco 2012) (thereby providing evidence in support for Hypothesis One), whereas much evidence exists to document how, when government support does exist, it tends to level inequalities (Arrow 1993; Schultz and Theodore 1972). This "role of the state," much maligned in the recent climate of neoliberalism, is now being reinvigorated as a kind of "fourth revolution," with Asia as the model exemplar (Micklethwait and Wooldridge 2014).[2]

Sixth, another apparent requirement, when seeking to achieve an outcome of long-term equity and equality, is to construct diversified systems able to provide more stable HE environments as systems become massified. As experience with the California Master Plan indicates, these systems can be constructed such that institutions are provided with funding appropriate to their mission, and are provided access to sufficient numbers of students who have demonstrated competence at the level of engagement designed for given institutions, and where faculties, administration, and regulatory authorities (whomever they are) agree on the mission, capabilities, and limits of each institution within the system. Such explicit and self-conscious ideas of mission, combined with explicit notions of limitation, militate against "mission creep" which is invariably a source of "introduced inequality" and instability where it occurs (Douglass 2000).

Given the foregoing, we can then provide two "contextual" conditions for each of the above hypotheses to be considered within. The first focuses specifically on issues concerning the changing economic structures—locally, nationally, regionally, and globally—and their implications for how, where, and why educational efforts are situated within these changing structures. More simply, given the dynamics of massification, how do nations in particular make assessments, judgments, and efforts to create appropriate higher education capacities within the continually changing parameters of labor markets at all four of the levels specified above? An important entailment of this question is how they do so (or are expected to do so) within a climate and structure of international competition such as that which has been generated by the pervasive focus on international rankings, a phenomenon that often generates stipulations for HEIs irrespective of what some would see as the requirement to produce quality education to meet local needs.

The second contextual condition that may usefully be addressed is this context of existing and future regional cooperation. Within this frame, we would invite inquiry into how universities with higher numbers of students might, could, or would foster

[2]On government policy design associated with higher education governance, see Capano (2017).

more regional cooperation in terms of promoting research, explorations in the range and nature of academic programs, and the various pathways and processes leading toward student mobility. This appears a critical consideration in many instances, since some commentators perceive that collectively we are running short of resources to invest in higher education if we continue to engage in unnecessary competition.

Conclusion

In addressing these two contradictory hypotheses and these two contextual conditions, individual contributors were asked what the implications may be for governance, and the leadership of education officials and HE administrators, as they grapple with the substance of these contradictions. It is clear to us that existing systems of higher education throughout the Asia Pacific region contain elements of both hypotheses, and that for empirically existing systems their "reality" can probably be located on a continuum defined by Hypothesis One at one end and Hypothesis Two at the other.

The purpose of this introductory chapter is to invite the further development of these hypotheses while simultaneously adducing for them data relevant to the general discussion of the differences that exist throughout the region in the overall progress of massification. Another lens through which we might simultaneously view this issue is to ask after the overarching costs and benefits to society of massification, and its appropriateness to enduring social structures within the societies in which it is occurring. This in turn may introduce discussion of the degree to which factors external to national systems of education, such as the more distinct macro forces of globalization itself, are creating the effective social and political context within which higher education investment, from both public and private sectors, takes place.

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Chapter 2
Massification of Higher Education in China: Problems and Solutions

Ying Gao

Introduction

The development of higher education can be divided into three stages on basis of the gross enrolment ratio (Trow 2000). That is, the elite stage with a gross enrolment ratio below 15%, the massification stage with a ratio from 15 to 50% and the universal stage with a ratio above 50%. As pointed out by Hawkins, Mok & Neubauer (2018) in Chapter One of this book, for the past three or four decades, higher education throughout much of the world, and certainly across the considerable differences of the Asia Pacific region, has been in one or another aspect of the massification phase (Trow 2005), depending on the specific country and its own unique circumstances. In general, the worldwide massification of higher education can be generally divided into two modes: the active mode and the passive and catch-up mode (Li 2014). The active mode is represented by developed countries such as the United States and Japan where the massification of higher education is a natural result of economic increase. The passive and catch-up mode is represented by some developing countries like China where the massification of higher education is being pushed as a 'leap forward' by the government though it is not consistent with the economic development. The active mode in developed countries is mainly supported by government funding, whereas the passive and catch-up mode in developing countries relies heavily on social funding (tuition fees and private donations). In terms of educational structure, the active mode is characterized by a diversified higher education system, while the passive and catch-up mode is featured by an extension of the elite stage.

Massification of higher education in China has led to a quick increase in student enrolment, in the number of universities and in the size of universities, which has

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given students more opportunities for higher education. However, this increase has also led to problems in the division of the different types and functions of universities. Consequentially, it has produced a whole series of problems like the gap between the development of higher education and the economic structure and societal demands.

Development of Massification of Higher Education in China

Higher education in China is in its massification stage and is characteristic of the passive and catch-up mode. The years 1995–2005 witnessed a rapid growth of higher education in China in terms of student enrolment. In particular, increase in enrolment has occurred since the year 1999. In 1998, only 1,080,000 students in China were recruited to universities, the gross enrolment ratio being only 8%. The target at that time was to increase the gross enrolment ratio to 15% by the year 2010, and therefore enter into the massification stage of higher education. In 1999, however, the number of students recruited to universities amounted to 1,520,000. By 2002, the gross enrolment ratio reached 15%. In 2010, this ratio increased to 26.5%. According to '*National Mid-long-term Educational Reform and Development Plan, 2010–2020*' (subsequently referred to as '*2010–2020 Plan'*), the gross enrolment ratio of higher education will reach 40% by the year 2020, approaching the level of universal higher education.

One consequence of this fast expansion was that the increase in government funding for higher education could not keep up with the speed of enlarging enrolment. Therefore, the funding rate per student kept declining. Within-budget expenditure from 1999 to 2005 showed a trend of continuous decline. Since 2006, there has been an increase in the funding rate and by 2009, the funding rate returned to the level of 1999. Since 2010, the expansion pace has slowed down. The number of on-campus students has remained basically stable while the investment in higher education increased dramatically. Funding in higher education per student, budgeted education fund per student and funds for public use have increased significantly. The issuing of the *2010–2020 Plan* further promoted the increase in government funding in 2011. Table 2.1 demonstrates the statistics of enrolment and funding from 1999 to 2011.

Predicaments of Higher Education in China

Following the expansion of higher education in China, some problems occurred. These problems have led to a whole series of major issues which are becoming top concerns for both the Chinese government and Chinese citizens. Below are some aspects of the issues.

Table 2.1 Statistics of enrolment and funding between 1999 and 2011

Year	Enrolment	No. of students	Gross enrolment ratio (%)	Annual funding per student
1999	1,548,544	4,085,874	10.50	15,231.00
2000	2,206,072	5,560,900	12.50	15,974.00
2001	2,682,790	7,190,658	13.30	15,445.00
2002	3,204,976	9,033,631	15.00	15,119.56
2003	3,821,701	11,085,642	17.00	14,962.77
2004	4,280,750	12,845,873	19.00	14,928.92
2005	4,837,445	15,060,351	21.00	15,025.47
2006	5,307,628	16,870,435	22.00	15,332.80
2007	5,551,665	18,424,493	23.00	16,319.98
2008	5,974,805	19,852,665	23.30	17,972.13
2009	6,312,722	21,132,684	24.20	18,646.97
2010	6,548,833	22,077,870	26.50	20,497.92
2011	6,753,113	22,888,480	26.90	24,753.14

From *China Education Book* and *China Educational Finance Statistical Yearbook*

Government Funding Rate

The quick expansion of higher education in China has been accompanied by low government funding. In 1998, investment in higher education featured 'government funding (60.5%) supported by social funding (39.5%)', and in 2008, it was changed to 'social funding (52.6%) supported by government funding (47.4%)' (Li 2014). The largest proportion of this increase in social funding came from an increase in tuition fees. In 1998, the average tuition fee was RMB1789 which was 33 and 82.8% of the income of people living in cities and the countryside, respectively. In 2008, the average tuition fee increased to RMB6612, making up 41.9 and 138.9% of the income of urban and countryside dwellers. The burden for low-income families is obviously enormous.

Development of Higher Education Among Regions

The second problem is the unbalanced development of higher education and the obvious gap among regions. The economic development of eastern, middle and western China is not balanced. Funding of the colleges and universities in the eastern developed region is significantly higher than that in the middle and western regions due to the fact that key colleges and universities are mainly located in the eastern region, and that the economic development between the regions is rather unbalanced. The gap between local colleges is even larger. Taking education funding per student as

an example, Beijing had the highest education funding per student in 2006, amounting to RMB34,151.39, while Jiangxi had the lowest, the amount being RMB8824.51. In 2011, the highest and the lowest were still Beijing and Jiangxi Province, the amount for Beijing being RMB63,701.30 and RMB13,152.88 for Jiangxi, which means that funding for universities in Beijing was 4.84 times that of universities in Jiangxi. Therefore, a big gap exists between the development of colleges and universities under the direct administration of the Ministry of Education of China and local colleges and universities.

Fairness Issue in College Entrance Examination

Ever since the year 1977 when universities were reopened in China after the Cultural Revolution, college entrance exam has been the only pathway for students to gain access to universities. Fairness in the college entrance examination is the fairness based on examination achievements. It is the uppermost concern which the masses draw much attention to and it is also regarded as the elementary function and spirit of the college entrance examination institution. However, this fairness has been constantly questioned by the fact that the uneven development of economy in China means that education opportunities for people from different regions are not the same, therefore resulting in students' different performances in the entrance examination. In addition, statistics shows that students from rural areas are on average handicapped in their competition for enrolment. In this 'once in a lifetime' opportunity, children from the rural areas had to overcome more obstacles than students from better-off families in the cities during the learning process. For example, the English level of students from the poor regions is usually weak due to their lack of English teachers and exposure to English resources. And, with a national English proficiency test being in its preparatory stage, English, which is a required subject for college enrolment, is likely to bring more pressure to these students once the test is nationally launched. If universities are entitled to decide on their own requirement of English level in addition to the requirement on the total scores, the English requirement is going to keep those students outside of many good universities.

Educational Quality

Problems in the quality of higher education are often associated with its expansion. Changes in higher education from the elite stage to the massification stage require not only an increase in the gross enrolment ratio but also changes of educational concepts, school type and size, quality standards, admission and selection mode, teaching content, curriculum design and management mode. Inadequacy of effort to improve the quality of education has resulted in a low-level, low-standard higher education system.

College English teaching, for example, has always been the target of criticism in the past decade in China. It has long been criticized as 'time-consuming with low efficiency'. Therefore, though college students hope to improve their English proficiency, they feel disappointed that the current English curriculum not only fails to help them but probably leads them in the opposite direction (Cai 2010). Under this circumstance, College English as a course is described as one of 'the most disappointing courses'. In the meantime, an increasing number of colleges are witnessing a dramatic decrease of credits for College English. 'College English may even retreat from the curriculum of some top mainland universities', according to Feng (2010). The trend of 'Expelling Foreign Languages' is emerging amid the atmosphere of criticizing the English curriculum.

In spite of the constant efforts made by the Ministry of Education and each university in reforming the teaching of College English, the huge mass of students with varied levels of English and the increasingly higher demand for a mastery of English as an international language in the globalized world highlight the new challenges for English teachers in China. There are a number of causes for this situation. Among them, students as a whole have remarkably different levels of English when they enter university. Enlargement in enrolment is accompanied by the lowering of students' academic level. There are a number of students who are not ready to learn anything, including English. On the other hand, due to the insufficiency in university facilities and faculty numbers, classes are generally over-sized, making it difficult for teachers to manage teaching. Teachers forced to teach big classes and long hours are struggling between their own professional career development and the improvement of the teaching quality.

Types of Universities

At present, China is in the late stage of industrialization. What the manufacturing sector most needs is skilled labourers from vocational colleges rather than the white-collar class cultivated by universities. A mismatch between the rapid development of the industrial structure and higher education will inevitably lead to the long-term coexistence of the bi-lateral difficulties faced by enterprises in regard to recruiting workers and university graduates finding jobs. If the structure of higher education is not improved, and colleges and universities do not implement featured development, this mismatch will last for a protracted period of time. The former efforts of making 'bigger universities' and upgrading universities are now challenged. The year 2014 witnessed the transformation of some colleges into vocational schools, showing that the Chinese government has made efforts to meet the need of the society for skilled technical workers.

Solutions to the Problems of Massified Higher Education in China

The above-mentioned problems have for long been the concern of Chinese people and the Chinese government. Some suggestions and measures have been proposed and taken in an attempt to solve these problems.

Contribution from the Private Sector and Increase in Government Funding

The development of higher education in China relies mainly on the constant increase in government funding in the past years. However, the increase in funding has not been in alignment with the increase in the universities and student enrolment numbers. Therefore, more funding from the government is needed. It is suggested that higher education should moderately reduce the proportion of tuition fees, gradually increase the proportion of government funding and widen the channel of the sources of other social fundings. The target is to increase government funding to take on 45–50% of higher education expenditure, tuition fees to take on 25% and other social funding to take on 25–30% (Li 2014). This increase will provide an important mechanism guarantee for the development of Chinese higher education.

In addition, the growth of private institutions has contributed and will contribute more to support funding of higher education in China. Therefore, more attention should be paid to the private sector. The following table shows the development of private institutions between 1998 and 2008 (MOE 1998, 2008) (Table 2.2).

According to the statistics, in 1998, there were only 21 private institutions in China, representing a portion of 2.1% of a total 1022 institutions, the number of students being only 0.65% of the total. The statistics in 2008 shows the great increase of private institutions in the period of 10 years between 1998 and 2008. The increase rate of the private institutions far surpassed that of the state-owned institutions during the same period. However, the proportion of private institutions is still low in the higher education system in China. A look at the comparison between the number of private institutions in America, Japan and China illustrates this point well (Quoted from Liu 2011b) (Table 2.3).

Table 2.2 The increase of private institutions in China (1998–2008)

Year	No. of Is	No. of PIs	% of PIs in Is (%)	No. of Ss in Is	No. of Ss in PIs	% of Ss of PIs in Is (%)
1998	1022	21	2.1	3,410,000	22,000	0.65
2008	2263	638	28.2	21,490,000	3,930,000	18.3
Multiple in increase	2.21	30.4		6.3	179	

Note Is—refers to Institutions; PIs—refers to Private Institutions; Ss—refers to Students

Table 2.3 Private higher institutions in America, Japan and China

Country (year)	No. of Is	No. of PIs	% of PIs in Is (%)	No. of Ss in Is	No. of Ss in PIs	% of Ss of PIs in Is (%)
America (2004)	4392	2655	60	17,570,000	4,490,000	25.6
Japan (2002)	1227	987	80	3,050,000	2,290,000	75
China (2008)	2263	638	28	21,490,000	3,930,000	18.3

Note Is—refers to Institutions; PIs—refers to Private Institutions; Ss—refers to Students

The major mission of American public universities/colleges is to ensure equal educational opportunities through relatively low tuition fees. They target at low- and middle-income groups. Instead, students from high-income families are more oriented to private institutions. In Japan, 80% of institutions are private and 75% of college students study in private institutions. The small number of state-owned and local public institutions represents the highest level of higher education in Japan and aims at nurturing elites from all walks of life. It is obvious that public institutions in Japan give priority to selecting talents so as to ensure the quality of its elite education. In comparison with the cases in America and Japan, the proportion of private institutions in China is very small and nearly all of them are at the low end of the education industry. Thus, most of the private colleges are not qualified to provide 4-year undergraduate education. Furthermore, they do not receive government subsidies. Tuition fees in the private institutions are inevitably much higher than that of public ones. As a result, private institutions have to target at student groups from well-off families but with low academic achievements.

The above analysis shows that the private sector is a very important component of higher education. It is necessary for the government to subsidize the development of private institutions so that they can have a more healthy development in their competition against the state-owned institutions and make more contributions to the development of higher education in China.

Increased Government Funding for the Poor Regions

In order to promote the balanced development among regions and improve the educational level of higher education in mid-west China, the Chinese government proactively promotes a programme called ‘Revitalization of Mid-west Higher Education’, aiming at improving the conditions of universities, promoting the level of school management, and effectively increasing high-quality regional higher education resources with the help of the central and local fiscal and policy support. In 2012, the programme put forward two important construction projects. One is ‘The Programme of the Construction of the Infrastructure Ability of Mid-west University’, with the

goal of improving the strength of the undergraduate colleges and universities. The programme focused mainly on the construction of 100 local universities in the 24 mid-western provinces, autonomous regions and municipalities. The other is 'The Promoting Project of the Comprehensive Strength of the Mid-western Colleges' supported by the Ministry of Education and the Ministry of Finance. It refers to the construction of a regional university to become the best university in terms of overall strength, school management and level of education in the 14 provinces and municipalities where the Ministry of Education has no subordinate colleges or universities.

With government efforts such as the above, it is likely that the unbalanced development among regions will be addressed in the future. The task facing higher education in China today is different from that in the 1980s. It has moved from solving the problem of 'having schools to go to' to solving the problem of 'going to better schools'. This is an extremely urgent task in the mid-western part of China.

Equity Against Effectiveness in the College Entrance Examination

The coming reform of the college entrance exam indicates strong government intention to deal with the fairness issue in selecting university students. Equity and effectiveness have always been a paradoxical pair in university recruitment. As is known, a basic starting point of public policy is to make reasonable trade-offs between equity and efficiency. The college entrance examination system which judges students through scores to a large extent ensures the relative equality of entering colleges. However, 'the extra score' rule in the past years has created opportunities for parents to help their children gain these scores and therefore obtain a special advantage in the final competition for universities. This has been severely criticized by the public in recent years and has led the government to put an end to it.

The recent planned reform is to bring a number of changes to the whole educational system. At the higher education end of the chain, it is hoped that students can be more scientifically selected by the universities. However, the changes under discussion in English requirements are likely to lead to more challenges to students from undeveloped rural areas where they cannot receive good English education in the early childhood. Their low achievement in English will become an obstacle for them to get enrolled in first-rate universities. Therefore, it is necessary to figure out an appropriate way to implement this reform so as to promote real fairness in the college entrance exam.

Improving Educational Quality by Reform

Improving the quality of education and the capacity of supply of first-class educational resources is the core task. A good system environment and reform of higher education are called for to meet the need of the world's largest higher education system and the change from the elite stage to the massification stage in China. It emphasizes deep reform and innovation. Higher education system reform is in progression, aiming at a guarantee of the development of higher education and quality improvement. In particular, this concern is prominent with private institutions. As is rightly pointed out by Dill (2007), it seemingly is an invariable requirement that governments must increase their regulation and monitoring of these new largely private institutions that contribute to massification to gradually increase their quality through rigorous QA and accreditation process.

To improve the educational quality of university teaching, it is necessary to change the assessment criteria for evaluating universities from a focus on academic publications to the quality of teaching. With teachers busy writing their own academic papers so as to promote their professional development, it is hard for them to really focus on teaching. Besides, it is necessary to change the students' attitude towards learning by adapting the implicit rule of 'easy entry, easy exit' to 'easy entry, hard exit'. That is to say, with the expansion of higher education, it has become easy for students to be accepted by universities, but if measures are not taken to raise the standard of graduation, the quality of higher education cannot be guaranteed. This has become the concern of many universities.

Promoting the Development of Vocational Institutions

What is needed in China at the moment is not an increase of university graduate numbers in academic fields, but rather, more skilled technical workers in various industries. To fill the gap between the development of higher education and the needed labourers caused by the industrial structure and market development, it is necessary to rely on the transformation of the mode of economic development, industrial upgrading and economic growth so as to provide college graduates with more jobs; on the other hand, higher education also needs to restructure itself so as to achieve diversification of colleges and universities. To promote the diversity of colleges and universities does not mean to guide the development of Chinese universities in accordance with European and American standards. The result of the evolution of the higher education system is that higher education systems around the world have all been marked with the characteristics of the era and features of each country. Division and diversification of colleges and universities are the result of the development of colleges and universities, mainly due to their practices and reforms. With economic growth and the diversification of social needs and under the circumstances in which the scale of colleges and universities are basically stable

and the scale of competition is intensifying, colleges and universities will find their own position and direction of development, and the patterns of the classification of Chinese universities will gradually be formulated.

In fact, one of the recent government initiatives has been to change some colleges and universities into vocational institutions whose aim is to produce graduates with practical techniques and employable skills. Against the backdrop of the uncomfortable feelings from some such colleges and universities, this programme has been proceeded in some provinces in China and it is hoped that with such a division, it will lessen the pressure of job hunting for graduates from all levels and types of universities.

Conclusion

The passive and catch-up mode of Chinese higher education determines that China still has a long way to go in its development of higher education. However, it is changing from the passive and catch-up mode to the active mode. The favourable conditions include stability of the scale of higher education, the surge of China's education expenditure and the great emphasis on improving the quality of higher education in an all-around way, and above all, the background of building a well-off society in China. With efforts from the Chinese government and other sectors, it is safe to predict that problems in massification of higher education in China will be gradually solved.

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Chapter 3
Competition for Talent and Unequal Development of Higher Education: Evidence from Chang Jiang Scholars Programme

Jin Jiang

The higher education system in the Asia-Pacific region has in recent decades experienced a massive expansion and moved from elite to massification (Jiang et al. 2018; Mok and Jiang 2017a). In particular, South Korea, Japan, Taiwan and even Hong Kong and mainland China have witnessed an unprecedented increase in higher education with strategies of privatization and marketization to meet the pressing demand for higher education (Mok 2016; Mok and Jiang 2017b). According to the statistics of UNESCO,[1] the gross enrolment ratios of higher education of these countries/regions except mainland China are much higher than the ratio of the world average, and reached more than 60% after 2010.

Although mainland China is a latecomer in higher education development, the Chinese government made a serious attempt to increase higher education opportunities in the late 1990s. In 1998, the Ministry of Education of the People's Republic of China (MOE) issued the document entitled 'The Action Plan to Vitalize Education in the 21st Century' (MOE 1998) which stated that the government aimed to achieve a gross enrolment rate of 15% by 2010. And the goal was later adjusted, to reach this percentage by 2005.[2] In early 1999, the MOE pledged to have an increase of 20% in the enrolment of higher education and revised the plan to target a 47% increase rate (Wan 2006). Since 1999, China recorded a significant increase in both higher education enrolment and gross enrolment ratios. The enrolment of higher education

[1] UNESCO Database, http://data.uis.unesco.org.

[2] 10th Five-Year Plan for National Economic and Social Development of the People's Republic of China, retrieved on12 September 2016, http://www.sdpc.gov.cn/fzgggz/fzgh/ghwb/gjjh/200709/P020070912638588995806.pdf (in Chinese).

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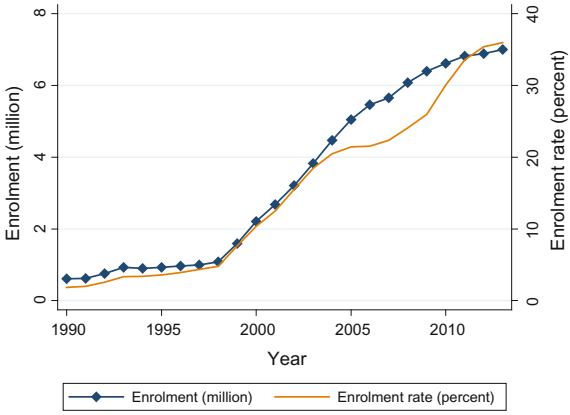

Fig. 3.1 National enrolments and enrolment rate of higher education, 1990–2013. *Source* Educational Statistics Yearbook of China, 1978–2013. *Note* Enrolment of higher education is measured by the number of students admitted in regular higher education institutions. Enrolment rate of higher education is measured by the enrolment of higher education relative to the cohort size of the same age. The number of graduates from primary education is used as the proxy for the cohort size, as the direct measure of cohort size is not available

increased slowly from 0.6 million in 1990 to 1.08 million in 1998, and leapt from 1.6 million in 1999 to 7 million in 2013, indicating a jump of more than 10 times in the capacity of higher education since 1990. Meanwhile, the enrolment rate of higher education, measured by the higher education enrolment relative to the number of students enrolled in primary education in the corresponding year, presents a similar trend regarding the changes of enrolment. The enrolment rate grew smoothly during 1990 to 1998, and surged from 1999 to 36% in 2013, indicating that the relative opportunity of higher education for the age cohort increased almost 20 times from 1990 (1.8%) to 2013 (36%) (see Fig. 3.1).

Competing for Global Talent

China has recorded an unprecedented growth in higher education in terms of enrolment (system capacity) and enrolment rate (enrolment relative to age cohort). In the light of Trow's definition of three-stage higher education development (Trow 1973), China's higher education system experienced the transformation from elite to a mass form within a short period of time.[3] The growth in opportunity of higher

[3]Trow adopts the gross enrolment rate (i.e. the percentage of age-group enrolling in higher education) to define the higher education development in three stages: elite, mass and universal education. The cut-off point of enrolment rate of the first two stages is 15%, and that between mass and universal education is 50%.

education may increase the quality of the population and their life chances. However, the massification has also created challenges for the further development of higher education. The expanding capacity and access may outstrip the ability of institutions to maintain the quality of higher education.

The quality of higher education is not only important for the sustainable development of higher education. More importantly, it is crucial for the national competitiveness in the globalizing world. In particular, in the context of intensifying competition for world-class status universities and meeting the pressing needs of the knowledge economy, governments in East Asia have made series attempts to groom their elite universities to become globally competitive (Mok 2005; Mok and Yu 2011). In the era of massification, the Chinese government has adopted a variety of strategies to develop higher education with 'a change from quantity-to-quality orientation', i.e. changing from a focus of quantity flow to an elevated emphasis on the quality of service provided in higher education (Li et al. 2011). Against the above backdrop, the Chinese government underscored the quality of higher education in the guideline of the country's development since 1996 (Ninth Five-year Plan (1996–2000),[4] Item 20). Moreover, the 11th Five-year Plan (2006–2010) stated that the development of higher education should emphasize upgrading quality and optimizing the structure (Sect. 3 of Chap. 28).[5] The quality of higher education institutions is largely tied to the research capacity of the scholars in the institutions. The needs of talent in China are thus very clearly urgent. In the context of the brain drain, the quest for global talent becomes much more prominent for China. Welch and Zhang (2008) suggest that Asian countries have all suffered significantly from the effects of the brain drain, in particular, China. A large number of scholars have gone abroad to study in the past several decades, but only less than 30% have returned (Welch and Cai 2011).

Realizing the importance of talents, governments have instituted great efforts to compete for global talent in response to the issues of the brain drain (Welch and Hao 2014). The Chinese government stated that the government will make an effort to strengthen the strategic planning of talents and actively attract overseas high-level talents [Sect. 1 of Chap. 29, the 11th Five-year Plan (2006–2010)]. Embracing the calls from the central government, and realizing the severity of the brain drain in the development of higher education, the regional and local governments joined universities to aggressively create concrete plans to attract top scholars (Wang et al. 2014). Recent studies suggest that the government's great efforts to compete for global talent have started to pay off (e.g. Welch and Zhang 2008; Yang and Welch 2010). And return migration (also called reverse migration) of highly skilled workers has significantly increased (Zweig et al. 2006; Wang et al. 2014).

[4]Ninth Five-Year Plan for National Economic and Social Development of the People's Republic of China, retrieved on 12 September 2016, http://www.sdpc.gov.cn/fzgggz/fzgh/ghwb/gjjh/200709/P020070912638573307712.pdf (in Chinese).

[5]11th Five-Year Plan for National Economic and Social Development of the People's Republic of China, retrieved on 12 September 2016, http://www.gov.cn/gongbao/content/2006/content_268766.htm (in Chinese).

The Chang Jiang Scholars Programme[6] (the Programme, hereafter) for the recruitment of global eminent scholars is a large and influential national programme attracting global overseas outstanding scholars.[7] In particular, the Programme was launched in 1998, the same year of the Chinese government's decision to expand its higher education system. The Programme thus represents an example of the Central Government's great attempt to attract global top talents in the context of the massification of higher education to tackle the severity of the brain drain in higher education development. An analysis of this large and influential national talent programme not only provides insights into current talent programmes aimed to entice global talents, but more importantly, helps us to revisit the strategy of higher education development and equality for higher education institutions and students. In the following sections, the author will first introduce this Programme and its achievements. The unequal development of the Programme will then be examined. The final section will discuss the negative consequences of the unequal development of the Chang Jiang Scholars Programme for universities as well as students in terms of educational inequality.

Overview of the Chang Jiang Scholars Programme

The Chang Jiang Scholars Programme (*changjiang xuezhe jiangli jihua)* was established by the Li Ka-shing Foundation (LKSF) and the MOE in 1998 under the coordination of Chen Zhili, the State Councillor and the Education Minister in China. The goal of the Programme is to attract global high-achieving scholars to China in order to foster leading scholars, nurture young scholars and enhance the global competitiveness of Chinese universities. It is considered to be one of the most prestigious scholarly honours in China. With the initial funding of 60 million HK dollars provided by the LKSF and some matching funds from the MOE, the Chang Jiang Scholars Programme provides preferential measures to attract higher level scholars by appointing them as Chang Jiang Scholar Chair Professors or Distinguished Professors in Chinese universities. This Programme also provides the Chang Jiang Achievement Award with the initial support of 10 million HK dollars from the LKSF.[8] In this chapter, the author focuses the analysis on the various aspects of the development of Chang Jiang chair professorships and distinguished professorships, as they pertain to the overall movement of massification.

In 2011, the MOE launched a new Chang Jiang Scholars Programme in line with the implementation of the national long-term development plan (2010–2020). According to the Implementation Approach of the Chang Jiang Scholars Programme (MOE 2011), 150 Chang Jiang Distinguished Professors with a term of 5 years and

[6]The Programme is also known as the Cheung Kong Scholars Programme and Yangtze River Scholars Programme.

[7]http://www.1000plan.org/qrjh/channel/5, retrieved on 10 September 2016.

[8]For more details, please see the official website of Chinese talent programmes: http://www.1000plan.org/qrjh/channel/5, and the website of LKSF http://www.lksf.org/20081205-2/.

a RMB200,000 annual allowance, and 50 Chang Jiang Chair Professors with a term of 3 years and a RMB30,000 monthly allowance (based on their actual working time period in designated universities)[9] will be appointed annually (MOE 2011, Items 3, 6, 20). The designated universities are responsible for providing Chang Jiang Scholars research facilities and support them to lead their research teams (Item 21), while the central government is responsible for providing dedicated funding to support the Programme (Item 8). The responsibilities of Chang Jiang Chair Professors and Chang Jiang Distinguished Professors are slightly different, but both of them are expected to introduce pioneering or core research in their field, nurture young scholars, lead their research team at the cutting edge of their research field to achieve internationally recognized academic achievements, and have forward-looking approaches and innovative strategies to promote the development of their field in their designated university (Items 9, 10). In addition, Chang Jiang Chair Professors are expected to promote the academic exchanges and collaborations between domestic universities and distinguished overseas universities and academic institutions (Items 10).

The Implementation Approach of the Chang Jiang Scholars Programme (MOE, 2011) details the eligibility of Chang Jiang Scholars. The eligibility of Chang Jiang Distinguished Professors includes several criteria. First, the age ceiling for applicants of natural sciences and engineering sciences is 45 years old while the age ceiling for humanities and social sciences is 55 years old. Second, applicants are generally required to have a doctoral degree and actively engage in teaching and research. Overseas applicants shall hold associate professorship or equivalent positions while domestic applicants shall hold professorship or equivalent positions. Third, applicants shall be capable of teaching core courses and their academic achievements are domestically and internationally recognized. They are expected to lead their research team, make crucial advancements in their research field and keep the field at an internationally advanced level. Finally, the applicants shall possess personal integrity and be dedicated to research and teaching (Items 11). Distinguished Professors shall be full-time staff, while Chair Professors are not required to be full-time, but must spend at least 2 months every year in their designated universities in China (Items 11, 12). The applicants for Chair Professor shall also actively engage in teaching and research at overseas universities with a full professorship in leading overseas universities. And their academic achievements must be well-recognized internationally (Item 12).

The application procedure for the Chang Jiang Scholars Programme involves three main processes (MOE 2011, Items 11–19). First, after the Scholar positions are established, universities shall open the posts for global recruitment. Applicants can be self-nominated or nominated by experts or embassies and consulates abroad. Universities are responsible for convening an academic committee to evaluate the applicants and recommend qualified candidate(s) to the MOE. The MOE will then organize an expert committee to peer review the candidate(s). Universities will sign employment contracts with the candidates approved by the MOE, and report to the MOE for the record. Finally, the MOE will announce the appointments and issue the certificates to the Chang Jiang Scholars (see Fig. 3.2 for the detailed procedure).

[9] A Chang Jiang Distinguished Professor is required to be a full-time staff member in the designated university while a Chang Jiang Chair Professor is not required to be full-time.

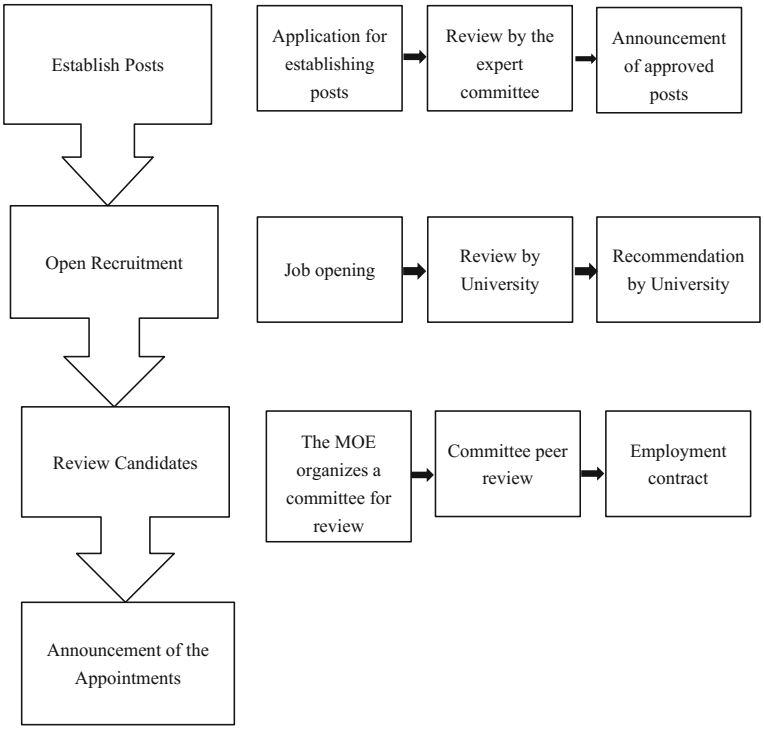

Fig. 3.2 Flow chart of the procedure for the Chang Jiang Scholars Programme. *Source* MOE (2011, items 13–19); http://www.edu.cn/zi_liao_1610/20060327/t20060327_169838.shtml

Achievements of the Programme

Till September 2016, 3032 Chang Jiang Scholars (Scholars, hereafter) had been recruited for 196 higher education institutions in 31 provinces and municipalities, of which 1991 were Distinguished Professors, 830 were Chair Professors and 211 were Young Scholars.[10] Figure 3.3 presents the number of Chang Jiang Scholars during 1999–2015.[11] The awarded Scholars increased from 71 in 1999 to 412 in 2015, growing almost five times. The number of Chair Professors was small in the early years with a maximum number of 10, but jumped to 78 in 2004 and reached 109 in 2008, the year which witnessed the largest number of this category and also the only year with over 100 Chair Professors. For Distinguished Professors, the number is larger than that of Chair Professors annually, and the largest number was 194 (year 2013–14). Chang Jiang Young Scholar has been a new category of this Programme

[10] All the statistics of the Chang Jiang Scholars Programme (unless otherwise stated) are calculated by the author based on the information extracted from the MOE.

[11] The Programme started in 1998 and awarded the first batch of scholars in 1999. The number of scholars in 2014 was a lump sum for both 2013 and 2014.

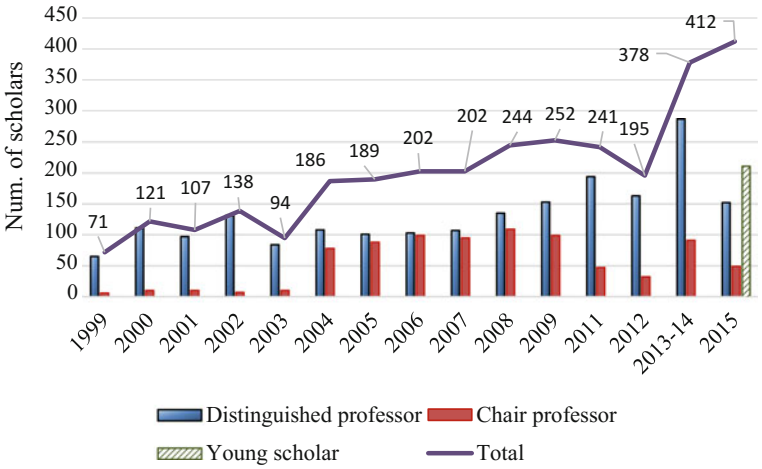

Fig. 3.3 Number of Chang Jiang Scholars, 1999–2015. *Data source* Ministry of Education of the People's Republic of China. *Note* The numbers were collected and summarized by the author. The MOE has announced the Chang Jiang Scholar appointment since 1999. The author collected data from 1999 to 2015 (the year of latest statistics). The statistics for 2010 were not announced and may be absorbed in the data of 2011. The data for 2013–2014 were announced in 2014, and separate statistics for these 2 years were not publicly available

since 2015. But the number of young scholars awarded in the first year was 211, larger than the summation of the number of both Chair Professors (49) and Distinguished Professors (152).

According to a report from the MOE about the achievement of the Chang Jiang Scholars Programme in 2014, the Programme has successfully attracted international academic leaders from various disciplines. As of 2014, 108 Chang Jiang Scholars had been selected as academicians of the Chinese Academy of Sciences and Chinese Academy of Engineering, of which 14 were awarded the Third World Academy of Science academicians. Some of the Chang Jiang Scholars became chief scientists heading projects funded by the National Natural Science Foundation and National Social Science Foundation, National Science and Technology Research Projects, chief directors of national key laboratories and national engineering (technology) research centres. Some Chang Jiang Scholars hold important positions in international academic organizations or leadership positions in universities, or are editors of international key academic journals (MOE 2014).

In addition, Chang Jiang Scholars have made tremendous achievements in research and teaching. According to the press release by the LKSF in celebration of the 10th anniversary of the Programme in 2008, about 93 research projects have won National Natural Science Awards, 27 have received National Innovation Awards and 132 have been granted National Technology Progress Awards. Meanwhile, 42 Scholars have won a total of 65 Higher Education's Humanities and Social Sciences Achievement Awards and a large number of Scholars have been granted prestigious

international awards (Li Ka-shing Foundation 2008). The Chang Jiang Scholars Programme also emphasizes the importance of teaching and cultivating students and young scholars. The Programme supports scholars in organizing and leading creative teams, teaching core curriculum and developing interdisciplinary and emerging disciplines (MOE 2014).

Unequal Developments of the Programme

As indicated above, the Chang Jiang Scholars Programme has made great achievements and gained international acclaim. It utilizes the international experience of eminent scholars to support the development of higher education by enhancing teaching and research. However, the development of this national programme is unequal across regions, universities and disciplines. In this section, the author will examine the unequal developments of this programme based on the statistics that the author extracted from annual announcements[12] from the MOE concerning Chang Jiang Scholar appointments.

Regional Inequality

The Chang Jiang Scholars Programme is an important part of the major national talent project and all universities in mainland China can apply to create the academic post of Chang Jiang Scholar. However, the statistics of the Chang Jiang Scholars show that the scholars are distributed unequally across areas and provinces. Since its implementation in 1998, there have been a total of 3032 scholars awarded as Chang Jiang Distinguished Professors or Chang Jiang Chair Professors. Four provinces/municipalities have attracted more than 200 Chang Jiang Scholars. The universities in Beijing have received the largest slice of the cake. A total of 832 Chang Jiang Professors are affiliated with the universities in Beijing; Shanghai has attracted 399 professors, Jiangsu Province 266 and Hubei Province 235. However, Hainan Province and Ningxia Province have only one Chang Jiang Scholar each. Figure 3.4 presents the distribution of Chang Jiang Scholars across provinces and municipalities during 1999–2015. As can be seen, the western area[13] of China is extremely disadvantaged. Eight provinces in this area have attracted less than 10 Chang Jiang Scholars each.

[12]The MOE announced the Chang Jiang Scholar appointment in 1999. The author collected data from 1999 to 2015 (the year of the latest statistics). The statistics of 2010 are not announced and may be absorbed in the data of 2011. The data for 2013–2014 were announced in 2014, and separate statistics of these 2 years were not publicly available.

[13]The classification of areas is based on the guideline from the National Bureau of Statistics of China (2011). The eastern area includes Beijing, Tianjin, Shanghai, Hebei, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. The central area includes Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The western area includes Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou,

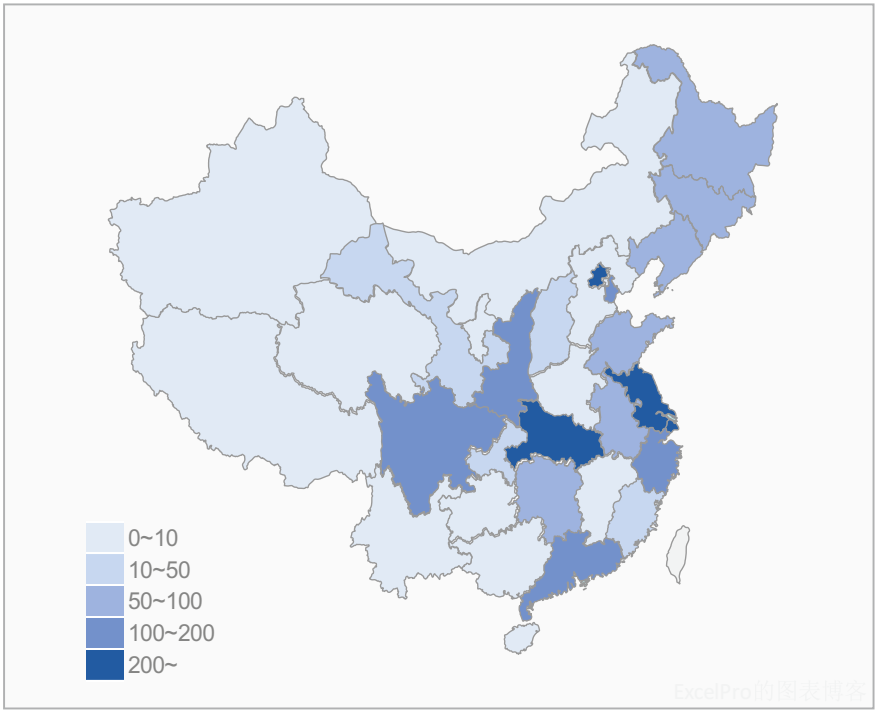

Fig. 3.4 Distribution of Chang Jiang Scholars across provinces and municipalities, 1999–2015. *Data source* Ministry of Education of the People's Republic of China (compiled by the author). *Note* The numbers are total numbers of Chang Jiang Scholars till 2015 for each province and municipality, and were calculated by the author. Four provinces/municipalities have more than 200 Chang Jiang Scholars: Beijing (832), Shanghai (399), Jiangsu Province (266) and Hubei Province (235), while Hainan Province and Ningxia Province have only one Chang Jiang Scholar each

These provinces are Xinjiang (7 Chang Jiang Scholars), Yunnan (7), Guangxi (6), Tibet (5), Guizhou (4), Inner Mongolia (4) and Qinghai (2). However, the top three provinces/municipalities possessing the largest number of Chang Jiang Scholars are located in the eastern area. The total number of Scholars in the eastern area is 1981, more than four times that of the western area (421). It is worth noting that the regional inequality of the development of this talent Programme is substantial. The dramatic variations in the number of scholars across provinces/municipalities may relate to not only the regional variations of social and economic development but also the distributions of differentiated levels of universities in provinces/municipalities.

Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. The north-eastern area includes Liaoning, Jilin and Heilongjiang.

Inequality Across Universities

The Chang Jiang Scholars Scheme is unevenly distributed not only across provinces/municipalities but also across universities. Even in the same province, the number of Scholars varies a lot across universities. Although 12 provinces have less than 10 Chang Jiang Scholars, the number of Scholars in one top university can be several times the number of Scholars that a disadvantaged province has. For example, Peking University and Tsinghua University, two top Chinese universities in Beijing, have 225 and 221 Chang Jiang Scholars, respectively. It means that the number of scholars of these two universities accounts for more than 50% of the total number of Scholars of Beijing. Similarly, for Shanghai with the second largest number of Scholars (399 Scholars), more than 60% of the Scholars are in Fudan University (133 Scholars) and Shanghai Jiaotong University (126 Scholars). Zhejiang Province is an extreme case, as 119 out of 125 Scholars are in Zhejiang University. This means that more than 95% of the eminent Chang Jiang Scholars of Zhejiang Province are concentrated in one university, even though there are a total of 107 universities in this province.[14] Table 3.1 lists the 16 universities with more than 50 Chang Jiang Scholars. It is worth noting that 10 out of 16 universities have more than 50 Scholars located in the eastern area, while two universities do so in the central, western and north-eastern areas each.

More intriguingly, the distribution of Scholars across universities can relate to the Project 985[15] and Project 211.[16] Table 3.2 shows the distribution of Chang Jiang Scholars by Project. All the 39 universities of Project 985 have 2294 Chang Jiang Scholars, suggesting that 1.25% of universities possess 75% of Chang Jiang Scholars. As all the universities of Project 985 belong to Project 21, there are 75 universities of Project 211 but not Project 985. These 75 universities have 18% of the total number of Chang Jiang Scholars. In fact, all universities of Project 211 have Chang Jiang Scholars, except Beijing Sport University. Only 82 non-Project 211 universities have Chang Jiang Scholars, accounting for only 6%. It is clear that the distribution of Scholars is highly concentrated in the universities of Projects 985 and 211.

The strategy of concentrating resources and funding for elite universities can be understood in a broader context of building world-class universities in East Asia. In order to win the competition and secure a better position in the league tables, the

[14]The number of universities in Zhejiang Province was extracted from the list of universities provided by the MOE in 2016, retrieved on 11 September 2016, http://gaokao.eol.cn/news/201606/t20160604_1407320_7.shtml.

[15]Project 985 is a national project to promote the development of Chinese top universities to become world-class universities in the twenty-first century. This project assigns large funding support to 39 universities. See more details on the MOE website about this project: http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s6183/201112/128828.html.

[16]Project 211 is the project initiated by the MOE to develop approximately 100 national key universities in the twenty-first century. Currently, 114 (if taking into account two universities of two branches in different provinces, the number would be 116) are defined as Project 211 universities. See more details on the MOE website: http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_846/200804/33122.html.

Table 3.1 List of universities with more than 50 Chang Jiang Scholars, 1999–2015

Area	Province/municipality	University	Number of scholars
East	Beijing	Peking University	225
East	Beijing	Tsinghua University	221
East	Shanghai	Fudan University	133
East	Shanghai	Shanghai Jiao Tong University	126
East	Jiangsu	Nanjing University	121
East	Zhejiang	Zhejiang University	119
Central	Hubei	Huazhong University of Science and Technology	93
Central	Hubei	Wuhan University	80
West	Shaanxi	Xi'an Jiaotong University	73
East	Guangdong	Sun Yat-sen University	65
East	Tianjin	Nankai University	60
West	Sichuan	Sichuan University	59
East	Beijing	Beihang University	57
Northeast	Heilongjiang	Harbin Institute of Technology	57
East	Beijing	Renmin University of China	54
Northeast	Jilin	Jilin University	52

Data source Ministry of Education of the People's Republic of China (compiled by the author)
Note The number of scholars is based on the data from 1999 to 2015. The classification of areas is based on the guideline from the National Bureau of Statistics of China (2011). The eastern area includes Beijing, Tianjin, Shanghai, Hebei, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. The central area includes Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The western area includes Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. The north-eastern area includes Liaoning, Jilin and Heilongjiang

Table 3.2 Distribution of Chang Jiang Scholars by Project, 1999–2015

	Universities of Project 211		Non-211 universities	Total
	Project 985	'Non-985' universities		
Number of universities	39	75	82	196
Number of scholars	2294	549	189	3032
Percentage of scholars (%)	76	18	6	100

Data source Ministry of Education of the People's Republic of China (compiled by the author)
Note The statistics were calculated by the author. Universities of Project 985 are all included in Project 211

governments in East Asia gather most of the resources and support for selected key universities with the aim to groom them into world-class universities (Deem et al. 2008; Mohrman et al. 2008; Mok and Wei 2008). It may be efficient and effective to prioritize the limited resources and support for the key universities to raise their competitive advantages in the global competition. However, the remainder of the universities receive insufficient funding support and are disadvantaged in regard to quality development, and generally lag behind.

Inequality Across Disciplines and Majors

Although Chang Jiang Scholars can be from almost all disciplines and majors, the distribution of Scholars has not been evenly distributed across disciplines and majors in the last 17 years since the Programme's inauguration. Currently, the Scholars are overwhelmingly from natural science and engineering (83%, 2521 Scholars), while Scholars from humanities and social sciences account for a small proportion (17%, 511 Scholars). Table 3.3 lists the top 10 majors with the largest number of Scholars under the Chang Jiang Scholars Programme: 73 Chang Jiang Scholars specialize in material science, accounting for the largest number of scholars of one single major (2.41%), while management science and engineering is the largest major in humanities and social science, only accounting for 1.75% of the total scholars. Besides the two largest majors, there are three majors in the discipline of natural science and engineering, with more than 50 Chang Jiang Scholars each (fundamental mathematics, condensed matter physics, control theory and control engineering), while only the finance major in social science has more than 50 Chang Jiang Scholars. The distribution of Chang Jiang Scholar across majors is uneven and largely biased towards natural science and engineering.

The stratification of Chang Jiang Scholars' development across disciplines can be related to the government's strategy of higher education development in recent years. The government has been changing the focus of higher educational development from increasing the number of slots in higher education institutions (quantity) to improving the quality of teaching, learning and research (quality). And quantitative indicators are designed to improve the educational quality of higher education institutions (Li et al. 2011). Upgrading the universities' quality in terms of the objective indicators is regarded as an important way to increase universities' competitive advantage in the competition of university rankings and world-standard universities. Funding is no longer simply a matter of increasing the number of students enrolled; universities and institutions of higher education in China are now subject to extraordinary pressures to upgrade themselves in terms of objective ranking. As Li et al. (2011) pointed out, a high priority of funding support is placed on international rankings based on publications in international journals, citations and international cooperation. Universities may also be given targets to improve their international ranking.

Against the backdrop of the changing strategy of the government and universities in regard to higher education development, as a large and prestigious national talent

Table 3.3 Top 10 majors with the largest number of scholars under the Chang Jiang Scholars Programme, 1999–2015

Major	Number of scholars	Percentage (%)
Natural science and engineering	2521	83
Top 10 majors with the largest number of scholars	483	15.93
Material science	73	2.41
Fundamental mathematics	66	2.18
Condensed matter physics	57	1.88
Control theory and control engineering	53	1.75
Inorganic chemistry	44	1.45
Biochemistry and molecular biology	44	1.45
Materials physics and chemistry	44	1.45
Mechanical manufacture and automation	42	1.39
Theoretical physics	32	1.06
Solid mechanics	28	0.92
Humanities and social sciences	511	17
Top 10 majors with the largest number of scholars	185	6.10
Management science and engineering	53	1.75
Finance	25	0.82
Economics	21	0.69
Ancient Chinese literature	17	0.56
Sociology	16	0.53
Modern and contemporary Chinese literature	13	0.43
Marxist philosophy	12	0.40
English language and literature	10	0.33
Accountancy	9	0.30
Political theory	9	0.30
Total	3032	100

Data source Ministry of Education of the People's Republic of China (compiled by the author)
Note 762 detailed majors are listed under the Chang Jiang Scholar scheme, and they are classified into two main disciplines. The denominator for calculating the percentage is the total number of Scholars of 3032

programme, the Chang Jiang Scholars Programme also favours natural science and engineering, in which the Scholars have higher probability to publish more papers in international journals of good repute, and amass a higher volume of publication citations.[17] Social science (including business) can also attract some attention, but the arts, professional training, vocational training, etc. are given low priority.

[17] In fact, Xie et al. (2014) found in their recent study that China now has become the second largest producer of scientific papers after the United States, and the quality of research by Chinese scientists has also been improving.

Discussions and Conclusions

Unequal Development of the Programme

As Hawkins, Mok and Neubauer discussed in the Introduction Chapter, the process of massification of higher education is highly complex and differentiated, taking various shapes and pathways. The massification of higher education usually brings challenges to the quality of higher education, as the increased capacity may easily outstrip the ability of institutions to maintain the quality of higher education institutions (Hawkins et al. 2018). China has witnessed a massification of higher education since 1999, and this process involves not only the dramatic growth of enrolments in universities but also is accompanied by a differentiation in the quality of faculties and research capacity. In recent years, the Chinese government has been making serious attempts to upgrade the quality of higher education in order to make the quality development keep pace with the expanded capacity of higher education institutions, and to meet the pressing needs of the knowledge economy and enhancement of the global competitiveness of universities around the world.

Realizing the importance of talents in the development of higher education, China has been actively engaging in the global 'talent war' to attract, retain and manage global talents. The government has issued several programmes to attract scholars from across the world to Chinese universities. The Chang Jiang Scholars Programme may be one of the most influential and prestigious talent programmes in China. The Programme has made great achievements by successfully attracting more than 3000 distinguished international academic leaders in various disciplines, promoting the research and nurturing young scholars in Chinese universities.

However, the development of the Chang Jiang Scholars Programme is significantly biased in favour of coastal areas and elite universities (such as universities of Projects 985 and 211). In addition, the priority of the Programme has been placed on natural science and engineering, and the humanities and social science receive low priority, and the situation is even worse for arts and vocational training. East Asian countries, including China, have encountered great pressure to win the competition for world-class status universities and university rankings. It thus may be efficient and effective to prioritize the development of elite universities and advantaged disciplines to increase their competitive advantages in the global world-class university competition. In this case, these universities and disciplines have received preferential resources and support for further development, while the remaining universities which receive insufficient funding will become more disadvantaged in regard to their quality development.

Inequality of Higher Education

The stratification and differentiation of the development of higher education will have significant impacts on the inequality of higher education regarding the unequal development of universities as well as equal opportunities for college students. At the university level, the differential support for key universities as opposed to the other universities may intensify the polarization between the 'top' and 'bottom' universities. Non-elite universities, disadvantaged in regard to quality compared to the elite universities, may encounter more difficulties in maintaining (let alone increasing) their quality profile. This is not only about the inequality of universities' development, but more importantly, the stratification of higher education also intensifies the inequality among students. As discussed in the Introduction Chapter, the massification of higher education leads to the enrolment of students of vastly different quality. Marginal students with little preparation for higher education usually attend low-quality universities (Hawkins et al. 2018). The disadvantage of students may probably be perpetuated if their universities fail to increase their quality in terms of faculty members and organizational structure. The disadvantages of students may be cumulative from their pre-entry to universities to their learning experiences in universities of lower quality. Even worse, the disadvantages may last into their transition from school to work and their further career development. In this case, the role of higher education in improving students' life chances and promoting social mobility is also challenged.

The massification of higher education, accompanied by the intensified competition for world-class universities and university rankings, may increase the inequality within higher education development. The Chang Jiang Scholars Programme is just an example of the unequal development of talents programmes in higher education institutions. This chapter shows the dramatic unequal development of the Programme across regions, provinces, universities as well as disciplines. In this case, the advantages of elite universities and high-achieving students are cumulative. The so-called Matthew effect in higher education development challenges the equality of educational opportunity. The equality of educational opportunity, the author argues, implies not just equal access for students from different social backgrounds, but also equal quality opportunities for them. It would not be 'true' equality if the dramatic growth of access for students from disadvantaged family backgrounds is at the cost of a deteriorating quality of higher education institutions. The educational policy thus is expected to address the issues of educational inequality and sustainable development of higher education in the era of the massification of higher education.

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Chapter 4
Changes and Challenges in the Rise of Mass Higher Education in Korea

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The remarkable expansion of higher education in the last few decades characterizes a critical feature of the South Korean education system. In the past 30 decades, South Korea (hereafter Korea) has shifted from being a country with one of the lowest levels of tertiary education to a country with one of the highest proportion of the population that has attained tertiary education. For example, only 13% of those aged 55–64 have attained any type of tertiary education in 2011, which was lower than most countries in Organization for Economic Cooperation and Development (OECD 2013). However, among individuals 25–34 years of age in 2011, 64% had any tertiary education, and this was higher than any other OECD country. Moreover, given that more than 70% of high school graduates have proceeded to higher education since the 2000s, Korea is likely to continue its path to a mass higher education society in which much of its population experiences college education.

At the same time, research finds that Korean higher education is hierarchically stratified (Park 2007). Though the majority of tertiary institutions in Korea are four-year universities offering BA or BS degrees, the number of junior colleges—second-tier institutions within higher education—have expanded greatly since the 1990s. Furthermore, newly established universities and universities outside the Seoul Metropolitan area are oftentimes considered to be the second tier of higher education. The social status of these schools is lower, and the degrees of these universities are less valued in the labor market. Therefore, although college education is increasingly accessible, the opportunities to attend prestigious elite institutions—and hence to achieve better social and economic opportunities through college education—remain relatively limited in Korea.

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These features of Korean higher education—the quantitative growth and the stratification within higher education—make Korea an important case for investigating the implication of expansion in tertiary education for social equality. On one hand, the remarkable increase in the number of college-goers in Korea implies that college education as the path to lead to better life chances is now accessible to more people. No longer is college exclusively for the privileged, and by enabling those who were previously unable to attend college to obtain college degrees, the expansion of higher education ultimately can serve as a social engine for equality. On the other hand, despite the general increase in educational opportunities for college, the social class gap in the opportunity for tertiary education can remain large. As researchers show (Lucas 2001; Breen and Jonsson 2000; Shavit and Blossfeld 1993) and the hypothesis one presented in the introduction of this volume (Hawkins, Mok, and Neubauer 2018) suggests, educational expansion does not necessarily guarantee the improvement of social equality in many countries. Instead, research outlines how students from advantaged family backgrounds are more likely to be placed in qualitatively better educational institutions (i.e., elite institutions) whereas their counterparts from less advantaged families end up attending less prestigious institutions.

Regarding two hypotheses presented in the first chapter of this volume regarding the social implication of the emergence of mass higher education system (Hawkins, Mok, and Neubauer 2018), this chapter examines that the rapid expansion in mass higher education which has accompanied the differentiation within tertiary educational system—horizontal stratification—has created a challenge of social equality in the Korean context. Particularly, I review previous research to examine whether the historical expansion in higher education in Korea has been accompanied by the development of social equality for young adults from varying social class positions. For this, I first provide an overview of the Korean education system to provide background knowledge on the specifics of Korean education. Second, I discuss the historical development of the higher education system, which is categorized into four stages; before the 1980s, the 1980s, the 1990s, and the 2000s. Third, I examine how the educational opportunity for tertiary education has remained unequal for social classes despite the quantitative expansion of higher education in Korea, supporting the hypothesis that inequality can expand despite the expansion of higher education. Finally, I conclude the chapter by discussing issues to be addressed in future research regarding Korean higher education and the social equality.

Structure of the Korean Education System

The education system in Korea consists of 6 years of primary education, 3 years of lower secondary education (middle school), 3 years of upper secondary education (high school), and 2 to 6 years of tertiary education (Fig. 4.1). The Korean government strives to create equal opportunities, at least up to secondary education level. Primary and middle school is compulsory education in Korea, which grants students opportunities to have education at a certain level (i.e., 9 years) regardless

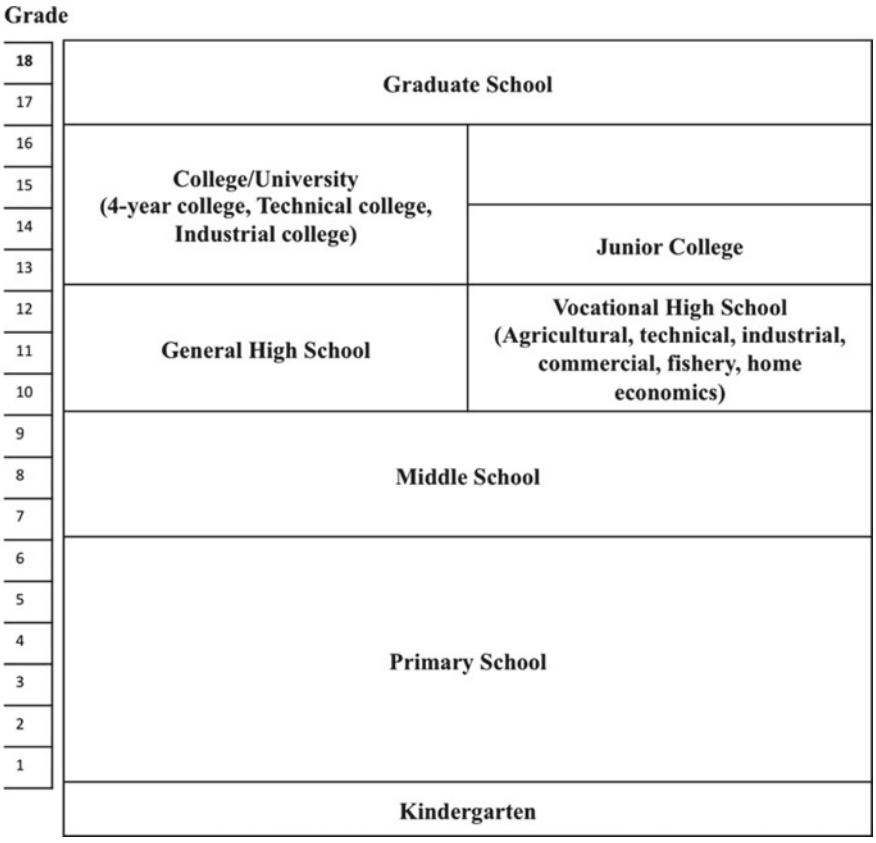

Fig. 4.1 The structure of the Korean educational system.

of family background. Since 2004 when middle school became compulsory education nationwide, almost all primary school graduates have moved on to middle school (MOE 2015). Both primary and middle schools are forms of comprehensive education without between-school and within-school tracking. After middle school, almost all middle school graduates proceed to one of the three types of high school; general high school (also known as academic high school), vocational high school, and special purpose high school.

The majority of middle school graduates (approximately 73% as of 2011) are enrolled in general high school (MOE 2015). The curriculum of general high school is planned and controlled by the government, and, thus it is widely standardized. The curriculum goals are to prepare students to proceed to any types of college. Specifically, students at general high school study ten subjects categorized as mandatory during the first year. This general curriculum covers fundamentals of major academic disciplines, such as Korean, mathematics, social studies, natural science, and liberal arts. In the second year, students are asked to choose their

concentration field between humanities/social sciences or math/natural science. Students take selective courses within their field from the second year to advance the knowledge about the field.[1] For instance, students in humanity/social science are required to take at least one of advanced courses from each category of Korean, social studies, and ethics, and students in math/natural science should take at least one advanced course from mathematics and natural science each.

Students who attend general high school are randomly assigned to schools in their residential district regardless of their academic performance as prescribed by the High School Equalization Policy (HSEP) beginning in 1974 (Park et al. 2013; Byun et al. 2012b; Kim 2002).[2] This assignment process is a sort of lottery system: Students first submit to a school district two to five names of schools that they hope to attend, and the school district later assigns students randomly after considering students' preferences. This policy applies to both public and private high schools. Unlike private high schools in the United Sates, Korean private high schools are "quasi-public schools" (Byun et al. 2012b, 223). They are mostly subsidized by the local governments, and their curriculums are controlled by the Korean Ministry of Education (MOE) like public high schools. Moreover, the overall qualifications of school teachers are usually homogenous across schools. Teachers go through similar educational trainings and a standardized examination controlled by the government. Therefore, there exists little variation in educational experiences and the socioeconomic composition of student body between high schools in each residential district.[3]

[1] While the MOE designed the selective curriculum in order to enable students to choose 20–50% of the subjects they take during high school based on their educational needs, the subject choices are usually bounded by the curriculum that an individual high school can provide within the general curriculum. In other words, the general curriculum is designed by the government, but the actual choices for courses within the general curriculum may be different by school. For example, according to the curriculum the Korean government designed, students are supposed to select two of seven foreign language courses to take beside English during high school. However, a high school can rarely provide more than two foreign language courses, which narrows the course choices that students can actually make.

[2] Before the HSEP, general high schools could choose prospective students on the basis of academic abilities (i.e., test scores on high school entrance examinations administered by individual high schools). This system generated not only academic pressures on middle school students but also gaps in high school placements for students' socioeconomic backgrounds. This further created between-school differences in academic performance and educational experiences. With the growing concerns about social inequality and academic stress, the Korean government enacted an educational reform for the student assignment system for general high school. Since 1974 when Seoul and Busan adopted this equalization policy, the policy has spread across other areas. However, the implementation was stopped in smaller cities and rural areas. Currently, approximately half of high schools in Korea follow the HSEP (Kim and Lee 2006). For more details of high school equalization, see Byun and Kim (2010) and Park et al. (2013).

[3] However, there can still exist substantial gaps in educational achievement across regions, particularly between large cities and rural areas (Kim 2005; Sorenson 1994). The disproportionate economic development between urban and rural areas and between Seoul Metropolitan area and other areas has resulted in the uneven distribution of social classes across the nation and accordingly in gaps in educational performance between urban students and rural students, which in turn has affected the results of college admissions. To reduce the impact of this regional disparity on the college admission and improve social diversity on campus, Seoul National University have selected

In addition to general high school, middle school graduates can proceed to vocational high school. Constituting approximately 30% of Korean high schools, vocational high schools were originally established to provide vocational skills and training to prepare students for the labor market (Park 2007). Vocational high schools are mostly specialized in a certain field, such as agriculture, engineering, commerce, fishery, or home economics, while a smaller number of vocational high schools teach several majors. Students apply for vocational high schools specialized in a major that they want to pursue, and vocational high schools individually select students based on diverse merits of students. However, this selectivity that vocational high schools have does not mean that vocational high schools are prestigious than general high schools. Although vocational high schools are designed to create skilled workers, a substantial proportion of graduates from vocational high schools has proceeded to college since the 1990s as the Korean higher education system expanded substantially. In fact, the college enrollment rates of vocational high school graduates peaked at 71.5% in 2010, and now about a half of them proceed to college after graduating from vocational high school.

Finally, relatively smaller proportion of middle school graduates enroll in prestigeous special-purpose high school, including foreign-language high schools, science high schools, and art high schools. Fewer than 4% of high school students enrolled at special-purpose high school in 2015 (Korean Educational Statistics Service 2015). The curriculum at special-purpose high school aims to provide specialized educational programs with educational elites who have academic or artistic talents. In addition, it is well known among Koreans that attending special-purpose high school has a positive effect on attending prestigious colleges (Byun et al. 2012a; Kim and Kim 2013). Therefore, a substantial number of middle school students often engage in intense competition for admittance to special high school. Since admission for special high school is based on admission examinations of individual schools and academic records during middle school, these middle school students engage in the extensive participation in shadow education to prepare for special high school admissions (Kim and Song 2009).

In sum, after high school, the majority of Korean students proceed to higher education. The two main types of higher education are two-year junior colleges and four-year universities. Junior colleges usually provide training courses for practical and occupational skills for the job market, whereas universities are more geared toward academic education as well as occupational training.[4] In 2008, 83.8% of high school graduates were enrolled in tertiary education including both four-year universities and two-year junior colleges, which was the highest level in Korean history. While it has gradually declined to 78.3% in 2014 (Korean Ministry of Education 2015), the college enrollment rates in Korea are still higher than most industrialized

20–30% of new students through "the regional equality admission policy" (is this a quote or a proper noun?) since 2005 (Seoul National University 2006).

[4]Beside junior colleges and universities, there are other types of higher education: teachers' colleges, industrial colleges, cyber colleges, and open universities. As of 2007, these institutions have composed about 19% of freshmen quota that the government assigns (MOE 2015).

countries. A larger number of college students attend four-year universities: In 2014, 53.3% and 24.5% of high school graduates proceeded to four-year universities and to two-year junior colleges, respectively.

Furthermore, current students have relatively easier access to the tertiary education than previous generations. The total number of students that the tertiary educational institution can accommodate has exceeded the number of high school graduates since 2010. In 2014, it is estimated that the number of college freshmen quota is more than the total number of high school graduates, as much as 9000 (Korean Ministry of Education 2015).[5] This gap is expected to grow wider because of the demographic change (i.e., the recent decline in fertility rates): it is estimated that the number of college freshmen quota will be more than high school graduates by as much as 110,000 in 2023. This number is equivalent to the student body sizes of six or seven of the largest universities in Korea. Therefore, Korea has achieved what Rosenbaum (2001) terms "college-for-all" society in that Korean high school graduates can now attend colleges as long as they hope to and can afford to attend.

Despite the increased opportunity for college education, many Korean high school students engage in a relentless competition for college admissions, particularly for prestigious four-year universities. While it is relatively easier to attend junior colleges or less prestigious universities, college admissions for prestigious universities is still competitive. Though the college admissions process has been reformed to evaluate diverse aspects of students' academic potential since the mid-2000s, college admission of Korean colleges is largely determined by test scores including College Scholastic Ability Test (CSAT) and weighted high school GPAs. Thus, students who aim to attend elite universities are expected to spend substantial amount of time preparing for those tests during high school. Overall, going to college has been easier due to the structural expansion in higher education and the declining number of high school graduates; however, the college admission for selective institutes still create the "examination hell" (Lee and Larson 2000) for many students in Korea.

[5]The increasing gap between the number of college freshmen that universities and junior colleges can accept and the number of high school graduates has increased social concerns over the quality of college education and the qualification of college students. Also, there have been increasing concerns about the "value" of college degrees in the labor market. Thus, the Park Geun Hae government has attempted to "restructure" higher education system to reduce the number of college students and weed out unqualified universities and colleges. The government plans to reduce the number of four-year university entrants by 25,000 and of junior college entrants by 14,700 until 2017 (MOE 2015).

Historical Development of Mass Higher Education in Korea

College is undoubtedly the most common post-high school career destination for Korean students. However, the development of mass higher education is relatively a recent historical trend in Korea. The historical development of the Korean higher education can be distinguished into four developmental periods; before the 1980s, the 1980s, the 1990s, and the 2000s. Each period was largely shaped by the educational policy derived by various changes in socioeconomic circumstances in Korean society.

The emergence and early development of the Korean higher education mostly occurred between the later nineteenth and the early twentieth centuries. The origin of the Korean modern higher education traces back to the late nineteenth century when American missionaries established a few institutes of higher learning (Kim and Lee 2006).[6] However, the seminal development of higher education was stopped by the Japanese colonization in 1910. The Japanese government mainly saw the development of higher education in Korea as "the breeding ground for the Korean independence movement" (Kim and Lee 2006, 560). Thus, following the Education Ordinance in 1911, these private institutions for higher education lost their status as educational institutions (Lee 1989). Instead, the Japanese government established Kyungsung Imperial University in 1924, which was then the only university in Korea. However, this institute was not for the public education: Only 25–30% of the entire student body were Korean, and the rest were Japanese students. Consequently, the social demand for higher education of Koreans was denied, and only a small number of elites had access to higher education.

It was not until 1946, a year after Korea's independence from the Japanese colonization, that the development of the modern university system began in Korea. Kyungsung Imperial University became Seoul National University (SNU), the first comprehensive modern university in Korea. The government additionally opened several national schools, including national universities in each province and teachers' colleges in major cities, to help rebuild the nation after the independence. At the same time, there was a development of private higher education institutions. Since the Korean government lacked educational resources for higher learning, private institutions were the main players in this early period of the higher education development in Korea. Existing private institutions for higher learning were reorganized into comprehensive universities, and new private universities were established. As a result, the number of the higher education institutions increased from 19 in 1945 to 55 in 1950 (Kim and Lee 2006) though higher education was still limited to a small number of the privileged.

[6]For example, two missionaries, Allen and Avison, started the first modern hospital for practicing and teaching in 1885, which developed into a medical school (Lee 1989). Also, a female missionary, Scranton, opened a girl's school for higher learning with fifteen female students, which was the first institute for higher learning for women. Later, the Sungsil Academy and Yonhi College were established in 1897 and in 1915, respectively. Native nationalist leaders established private higher learning institutes, including Bosung College, in 1905.

The Korean War (1950–1953) stalled the overall development of educational system. After the war ended, however, there was the crucial historical development in Korean education. The 1960s and 1970s built a foundation for the higher education expansion in the 1980s as primary and secondary education greatly expanded. During the 1960s and 1970s, the number of institutions and the student enrollment in primary and secondary education increased remarkably. The number of primary school increased by 25% during the 1960s from 4496 in 1960 to 5961 in 1970. The student enrollment of primary school sharply increased by 23% between 1963 and 1970 as well. The number of middle school students grew by 33% between 1960 and 1970, and student enrollment almost doubled from about 0.7 million in 1963 to 1.3 million in 1970 (MOE 2015).

Two major changes of socioeconomic circumstances in Korea shaped this rapid growth of education at the lower level; the rapid increases in the birth rates of Korean baby boomers and the development in the national economy. After the Korean War, the number of newborn babies rapidly increased, increasing the Total Fertility Rates (TFR) to about 6 in 1960. Due to this unprecedented growth in birth rates, the percentage of the population ages 0–14 year in Korea then was 42% (National Archives of Korea 2016). This dramatic growth of young population created a substantial increase in social demand for primary education in the 1960s. In the meantime, the Korean national economy began its growth. The Korean government attempted to boost the national economy based on light industry (i.e., labor-intensive manufacturing industry), which required many low-waged labor workers with a lower level of education. Furthermore, the economic drive performed by the government increased the overall level of household income. Coupled with the increase in primary school graduates, the improvement of economic situation expanded the socioeconomic demand for middle school education among Korean families (Kim and Lee 2006).

In the 1970s, the public demand for higher education substantially increased with the gradual growth in secondary education. Two governmental policies especially helped to boost social demand for the expanding of higher education including the exam-free middle school admission policy in 1971 and the high school equalization policy in 1974 (Shin 2012). Before these policies, students had to pass a competitive examination for middle school and high school admissions. Under this examination-based admissions system, there was intense competition for attending prestigious middle school and high school. Private tutoring among students at middle school and high school was rapidly flourishing, and the rigid achievement gaps between schools created social concerns. The Korean government responded to the intensified educational pressure among students and their families by removing admissions tests for middle school and high school and began to assign students randomly to schools in a residential district. Though these policies did not directly aim to achieve universal secondary education, the policy changes undoubtedly led to the considerable expansion in secondary education in the 1970s and 1980s (Kim and Lee 2006; Shin 2009). As Fig. 4.2 shows, middle school enrollment began soaring in the mid-1960s and increased dramatically during the 1970s. The number of high school students started to follow this pattern a few years later, which increased social demands for college education.

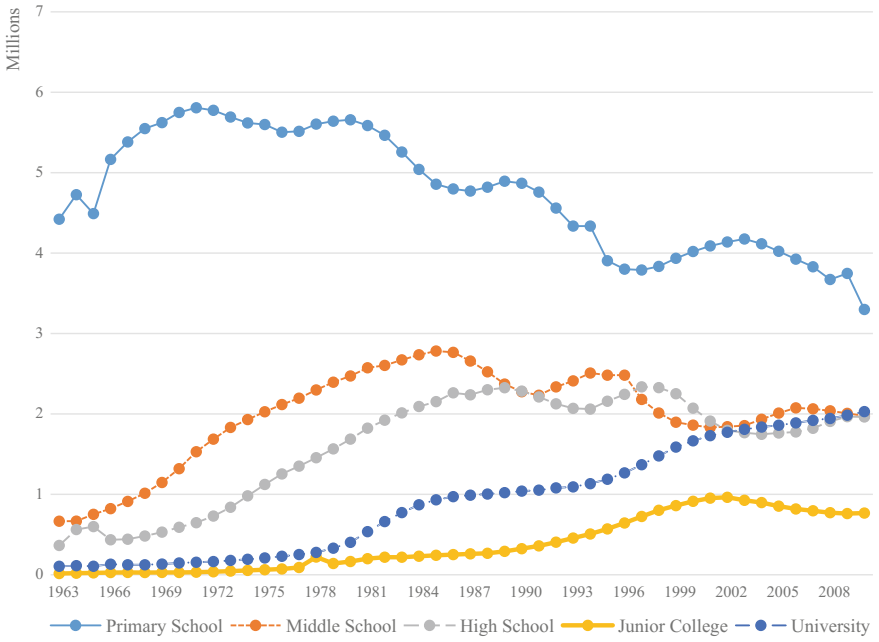

Fig. 4.2 Student enrollment by school level. *Sources* KESS. *Statistical Yearbook of Education*. http://kess.kedi.re.kr/eng/

However, the government took a restrictive and controlling approach toward the growth of higher education while it actively coped with soaring education demand by enlarging educational opportunity for primary and secondary education. The Park Chung-hee government proclaimed the Temporary Exceptional Law on Education in 1961, which granted the MOE with an authority over higher education. The MOE was entitled to approve the establishment of higher educational institutes, to order the closure of existing institutes, and even to engage in appointment and layoff of professors (Kim and Lee 2006). More importantly, by law, the MOE was authorized to assign quotas in college admissions for each school. It could also order a college to decrease the number of students when the performance of the college was not met up to the government's standard. Therefore, the increase in college enrollment appeared relatively less dramatic compared with the increase in secondary education enrollment during the 1960s and the 1970s (see Fig. 4.2) although social demand for higher education became gradually higher with the expansion in secondary education.

The Korean higher education critically expanded in the 1980s when the government passed a major higher education policy (Park 2007). In 1981, the government adopted "graduation quotas" which replaced the existing regulation over admission quotas. In 1981, the Chun Do-hwan government set the number of college graduates rather than college entrants and allowed four-year universities to accept 30% more students than the predetermined number of graduates (15% more for two-year junior

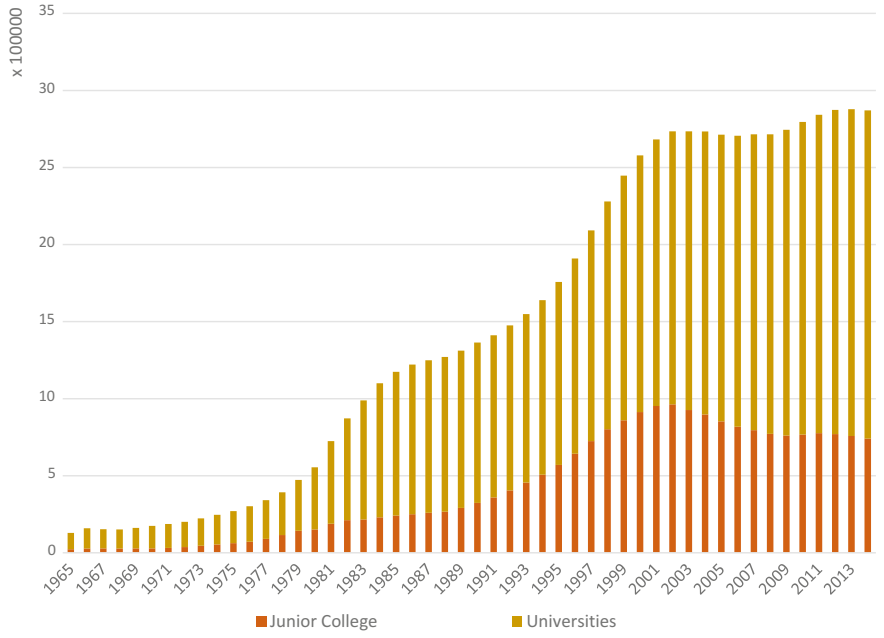

Fig. 4.3 Student enrollment in tertiary education. *Sources* KESS. *Statistical Yearbook of Education*. http://kess.kedi.re.kr/eng/

colleges). The justification for this policy was to strengthen the quality of college education and mitigate the overheated competition for college admissions (Kim and Lee 2006). The government asked colleges to let go of a certain portion of students who did not meet the educational qualifications before graduation. However, the government came to encounter a strong backlash of college professors and students against this policy, which ultimately made the government discard the graduation quota system in 1988 (Park and Weidman 2002). As Fig. 4.3 shows, there was the noticeable increase in the college enrollment in the early 1980s. In fact, the number of college students grew from 0.6 million in 1980 to 1.36 million in 1985 and then by 14% every year between 1981 and 1984 (Park 2007).

The drastic expansion in higher education in the 1980s was followed by another critical growth in the 1990s when the Kim Yeong-sam government adopted a new educational reform for higher education in 1995. The core of this reform called "Recommendation for Educational Reform to Build a New Educational System" was to "deregulate and liberalize the educational system to supply human capital with diverse abilities needed by society" (Park and Weidman 2002, 50). Facing increasing pressure of global economy, the government was committed to improving the higher education through diversification and specialization of higher education. It aimed to boost more competitive advantages of the national economy by increasing the educational opportunities for young people. Particularly, the government initiated two

important shifts to facilitate the expansion of higher education. First, the government eliminated the admission quota system so that individual institutions could decide admission quotas and have larger extent of autonomy in school management.[7] Second, the government diversified criteria and relaxed regulations for establishing new private schools.

This policy reform soon led to a substantial expansion in higher education, especially around private higher education. Schools increased their own enrollment quota to compete with other schools since increased enrollment meant more revenue for schools. Therefore, the number of students on college campus doubled during the 1990s. After the number of college students first exceeded 1 million in 1990, the college enrollment continuously grew from 1.5 million in 1995 to 3.1 million in 2000 (see Fig. 4.3). Furthermore, as Fig. 4.4 shows, the number of higher education institutions, particularly private institutions, doubled. There were 471 national institutions and 1,109 private institutions in 1990, and these institutions increased to 872 and 2,375, respectively. Since the increased enrollment directly translated into more revenue for individual colleges, private universities were newly established. Those existing prestigious universities in Seoul launched new branch campuses outside Seoul, and many small private universities were additionally established (Kim and Lee 2006). Overall, the 1990s was the period of a critical breakthrough in the development of Korean higher education, which shaped the mass higher education system currently in place.

In the 2000s, however, social demand for higher education began to decline. Since the decline of birth rates in the 1970s, the number of high school graduates in the early 2000s also declined, and accordingly, the college freshmen quotas started to exceed the college entrants. Furthermore, there was a concern over overeducation of college graduates: As the general educational level of younger generation increased—motivating them to pursue high-paying secure jobs and avoid manufacturing jobs—the unemployment issues of college graduates emerged. Therefore, in 2004, the Roh Moo-hyun government began to give financial incentives for higher education institutions to reduce the size of student body voluntarily. The subsequent Lee Myung-bak government (2008–2013) was committed to the reconstructing of higher education to reduce the college enrollment. Despite the governmental efforts, the student enrollment in higher education has not substantially decreased since 2000. Although the number of students at junior colleges and industrial colleges has continually declined, the student enrollment of four-year universities has increased. Therefore, the overall size of college enrollment remained around the similar level during the 2000s. The educational reforms were mainly targeted at junior colleges with low performance, so four-year universities, particularly the elite institutions, remained mostly intact. This continual expansion of four-year universities charaterizes the current massification of higher education in Korea.

[7]Seoul Metropolitan Area was not included in the policy to prevent the drastic increase in student enrollment in college in Seoul and neighboring regions, which could further enlarge the existing regional disparities for educational opportunities and educational qualities.

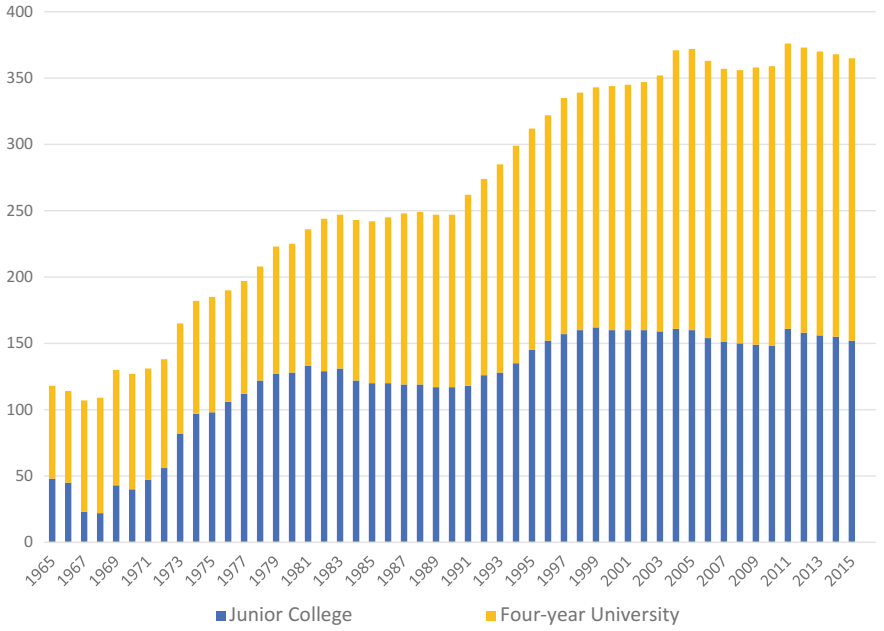

Fig. 4.4 Number of higher education institutions. *Sources* KESS. *Statistical Yearbook of Education*. http://kess.kedi.re.kr/eng/

Challenges in the Rise of Mass Higher Education in Korea

The history of the Korean educational system describes an impressive expansion in the opportunity for higher education for the last three decades. The doors to college are wide open to the public as the number of educational institutions has gradually increased. The clear majority of Korean students are destined to go to college nowadays, which is unprecedented in Korean history. This leads to an important question regarding the social implication of the massification of tertiary education: Does this mean that Korean students have more equal access to college education for social classes? Has this rapid expansion in higher education in Korea enabled students to have better life chances equally regardless of their family backgrounds? In this section, I will discuss the implication of the emergence of the mass higher education for social equality in Korea by reviewing prior literature. I will show that social inequality can still substantially remain despite the improvement of the overall access to college education as the hypothesis one in the first chapter of this volume (Hawkins, Mok, and Neubauer 2018) suggests.

Previous studies on the consequences of educational expansion have documented persistent inequalities in educational attainment despite substantial improvement of access to higher education in many countries (Sianou-Kyrgiou 2010; Grodsky and Jackson 2009; Gallacher 2006; Davies and Guppy 1997; Shavit and Blossfeld

1993). They commonly find that the strengthening of the stratification within higher education is conducive to the perpetuating social inequality for higher education. As the educational system expands, higher education, as well as, other levels of education can be stratified based on qualitative differences between individual institutions. Some institutions are more prestigious than others, and selective institutions have more resources (Bowen et al. 1998). Though there is an ongoing debate on whether top-ranked institutions offer a better education for students, they likely provide students with better social status and career benefits compared with less selective schools (Karabel and McClelland 1987). Furthermore, as advantaged parents, than disadvantaged, more likely send children to more selective colleges to transmit the social advantages to children, class inequality that is reproduced through children's educational achievement can be effectively maintained (Lucas 2001) even when there is an improvement in terms of the overall access to higher education (Kim and Bang 2005).

Similarly, studies on educational equality and the expansion of higher education system in Korea have found the persistent inequality of social class for educational opportunities in higher education as students have unequal access to prestigious colleges (Chang 1999; Kim and Byun 2007; Park 2007; Kim and Bang 2005). For instance, two studies in the 2000s (Park 2007; Kim and Bang 2005) reveal that the effect of family background—measured by father's education—on one's transition to college has persisted or even increased across birth cohorts despite the overall expansion in the higher education system. Particularly, both studies show that the father's education is positively associated with attending four-year universities more strongly than with attending two-year junior colleges. Kim and Bang (2005), in their study on the gaps in educational access to tertiary institutions for social class and gender, find that the impact of father's educational attainment on children's transition to tertiary institutions has remained stable for four decades. Moreover, the effect of father's educational attainment was much greater on the probability of children's transition to four-year university over two-year junior college, which shows that father's education is an important factor in shaping the children's access to more selective tertiary education in Korea.

Park's study (2007) similarly points out the increasing inequality of students' access to four-year universities for social classes. According to this study, whereas the overall proportion of high school graduates who enter tertiary institutions has increased across the recent four cohorts for both men and women, the importance of the father's education on children's access to four-year universities has been more pronounced over time. For the oldest cohort (born before 1961) in the study, the odds of attending university were twice grater for those with fathers who had completed higher education than those with fathers who had not. However, the gap between these two groups grew to almost five times for the youngest cohort (born after 1970).

These results—the growing class gaps in educational opportunity for four-year colleges despite the overall expansion in the higher education system in Korea—have an implication for social inequality because of the rigidly stratified higher education in Korea and its strong influence on unequal life chances of graduates from different institutions. While both the number of institutions and the size of student body

have been noticeably expanding since the 1980s, tertiary institutions are hierarchically stratified based on their locations (i.e., Seoul Metropolitan area and non-Seoul Metropolitan areas), the types of institutions (i.e., junior colleges and universities), and the history of institutions (Hwang 2005; A. Kim 2004; Park 2007). Usually, four-year universities are considered to be more prestigious first-tier institutions than two-year junior colleges which are seen as second-tier institutions. Within four-year universities, however, institutions receive different social recognition and hence have different prestige. Particularly, the limited number of four-year institutions in Seoul has been long seen more prestigious than other institutions outside this metropolitan area. Among these schools, only a handful of schools, including "SKY" universities[8] which is the acronym of the first letters from the names of three top-notch universities in Korea, have been more prestigious (*Myung-moon*-dae) than any other institutions for a long time. Overall, although all institutions officially offer bachelor degrees or associate degrees, only relatively smaller number of four-year universities are recognized to be more desirable and preferable to attend among secondary students and their parents as their degrees are more valued socially as I will present below.

This long-held stratification between institutions creates various benefits for graduates from selective colleges (Chai 2007; Chae and Kim 2009; Lee and Kim 2003). For example, the degrees from more prestigious colleges can translate into diverse advantages in the labor market. According to Chae and Kim (2009), the prestige of four-year institutions has a critical influence on the graduates' transition to labor market. Their study shows that the probability of having a full-time job after graduation is 1.66 times greater for male graduates from four-year institutions located in Seoul Metropolitan area than their male counterparts from outside the metropolitan area. Similarly, another study (Lee and Kim 2003) on the transition to labor market among Korean college graduates finds that having degrees from highly selective four-year universities located in Seoul helps job seekers with their transition to the first jobs. Specifically, compared with graduates from four-year universities outside Seoul, those who graduated from institutions located in Seoul take shorter times to escape the unemployment. Moreover, this study shows that the institutional affiliations—which school one graduated from—are more important factor in determining one's transition to the first job than his or her personal endeavor to improve his or her resume (i.e., acquisitions of job-related license, prior job experiences, participation in job trainings). Furthermore, graduates from four-year institutions located in Seoul enjoy higher level of income compared with their peers from four-year institutions outside Seoul. According to Oh (2007)'s study, the income of graduates from universities outside Seoul is about 11% lower than one of those from institutions in Korea, controlling for individual characteristics related to employment. Despite an ongoing debate on whether the gaps in labor market outcomes between graduates from different tertiary institutions are attributed to the disparities in human capital

[8]"SKY" refers to three schools including Seoul National University, Korea University, and Yonsei University. The nick name, SKY, is given because the competition to enter one of these universities is as intense as reaching the sky.

between job seekers or to the effect of the institutions, researchers generally agree that graduates from selective institutions are better off in labor market in Korea.

On top of the economic advantages, graduates from more prestigious tertiary institutions can expect to benefit from informal social network with alumni. Though there have been limited empirical studies, many scholars argued that graduates from prestigious colleges enjoy diverse resources derived from "academic cliques"—called *hagbeol*—in the Korean context (Lee and Brinton 1996; Hwang 2005). Graduates from a few top-ranked colleges are believed to have exclusive social connections with alumni, which translate into various opportunities. Particularly, these informal organizations are often criticized for perpetuating social inequalities in Korea as they enable the members to benefit from what sociologist Tilly (1999) conceptualize "opportunity hoarding." Opportunity hoarding occurs "when members of a categorically bounded network acquire access to a resource that is valuable, renewable, subject to monopoly, supportive of network activities, and enhanced by the network's modus operandi" (10). Only those members who belong to an academic clique can have access to resources that the networks can provide, and hence these small number of individuals from selective top-notch universities tend to dominate socioeconomic opportunities and distribute them between themselves (K. Lee 2007; Hwang 2005). They also have better chances to take higher ranks in private and government organizations, which enables them to have substantial influence in economic and political arenas and accordingly reinforces their social status as an elite group in Korea. Therefore, attending prestigious universities in Seoul does not only mean that students can expect better educational environment; it also means that they can have better opportunities to be connected to elite groups in Korea.

Overall, although Korea has become a leading country in endeavor to increase access to tertiary education, many studies have documented the persisting and increasing disparities in access to four-year universities which are considered to be the first tier in the stratification structure of Korean higher education system. These four-year institutions, especially the small number of schools in Seoul Metropolitan area, can provide economic and social advantages to their graduates and enable them to have better life chances that those who graduated from less prestigious four-year universities or two-year junior colleges are less likely to have. Therefore, the class disparities in access to these selective four-year universities can lead to the disparities in other life outcomes between students from more advantaged family backgrounds and those from less advantaged ones, which can help to maintain the existing social inequality in Korea.

Conclusion

This chapter addressed the historical development of the Korean higher education and discussed the implications of the expansion in the higher education system for social equality. The emergence of the mass higher education system is a relatively recent historical phenomenon in Korea compared with other industrialized countries.

The rapid expansion in the higher education system over the last three decades has resulted in the drastic increase in the number of young Koreans who study at higher education institutions. Approximately, seven out of ten high school graduates have transitioned to college after high school each year since 2000, and more than three million are currently enrolled in any type of higher education institutions in 2015. This means that the opportunities for college education are not exclusively open to a limited number of young people from privileged social background any longer; college education is a salient social institution shaping the educational experiences among the majority of Korean youth.

However, this quantitative development of the mass higher education system has not necessarily created equal outcomes, particularly because access to prestigious institutions that would be more beneficial for students' future careers remains elusive. Higher education institutions are stratified based on their reputations, history, and the institution type. More importantly, the stratified educational system creates differing benefits for graduates. For instance, graduates from four-year universities are more likely to land better positions than their counterparts from two-year junior colleges. Also, degrees from prestigious universities in Seoul area are more valued in the labor market than those from other universities outside Seoul. Furthermore, given strong informal alumni network, the benefits from graduating from a small number of prestigious universities can have a lifelong influence in the Korean context. However, the access to these high-status universities is disproportionately distributed across social classes. Previous studies on the social implications of the expansion in the Korean higher education system show that high school graduates from more advantaged families are more likely to proceed to four-year colleges, and parental SES has gained more importance over cohorts. In other words, despite the equal opportunity for higher education, the opportunity for attendance to elite institutions that dominate the hegemony in the Korean educational system is still unequally distributed across social groups. The Korean case shows how social inequality can substantially remain even when the overall access to higher education expands.

Therefore, in light of the Korean higher education system, we should pay close attention to the qualitative disparities of social groups in educational experiences rather than the quantitative access to higher education. More studies should examine the differences in where high school graduates proceed after high school, and how the pattern is shaped differently for social classes. Moreover, we hope to see more studies on the so-called "horizontal stratification" of educational experiences among college students and its implication for social equality in Korea (Charles and Bradley 2002). Students supposedly engage in college life in a different fashion across social classes. They can choose different fields of study, have different academic performance, have different career pathways, and can partake in different types of nonacademic activities (Rivera 2015). These differences in institutional characteristics or college experiences can be translated into further gaps in diverse outcomes after college (Gerber and Cheung 2008). Therefore, with future research on the gaps in college education and college life among students from diverse social groups, we could have a better understanding on the role of higher education in the mass higher education society.

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Chapter 5
A Double-Edged Sword—Thoughts on the Massification of Higher Education in India

Miloni Gandhi

> *My message, especially to young people is to have courage to think differently courage to invent, to travel the unexplored path, courage to discover the impossible and to conquer the problems and succeed. These are great qualities that they must work towards. This is my message to the young people.*
>
> —APJ Abdul Kalam

The late APJ Abdul Kalam, eleventh president of India wanted to see the success of India on the educational front and encouraged the young minds of the country to think and dream in a world where many of India's children are statistically impoverished. Yet, thinking and dreaming in a country without adequate facilities for all children to make these dreams a reality makes for a difficult task. There has been a definite push for education to be the vehicle by which to make such dreams a reality. A focus on education at all levels, primary, secondary and tertiary can be viewed as a long-term solution to bridge the chasm between the rich and poor within the country as well as leveraging India as a more competitive player in the global marketplace. This chapter will focus on the massification of the tertiary education system in India, touching briefly on the educational pipeline leading to enrolment in an institution of higher education, and the trials and tribulations of massification in the Indian higher education context. As presented by Hawkins and Neubauer in the introduction, "the process of massification itself is highly complex and differentiated" but is generally thought of as increasing access which in turn can lead to greater equity and equality. In the case of India, I refer to massification as a double-edged sword because in fact a case for both hypotheses presented by Hawkins and Neubauer can be made in the

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context of India depending on through which lens you choose to view the issue. With a HE system as vast as found in India, there are numerous arguments that support both hypothesis 1 that massification actually or eventually increases inequality (in India this inequality now just spreads to a larger group of players) and the somewhat contradiction posited in hypothesis 2 that over time massification in HE increases long-term equity and equality even with all the trials, tribulations and intermediary inequality that have to be overcome.

As massification of higher education continues to be an ongoing trend in an increasingly borderless world (Altbach et al. 2009), the end result of this massification across the globe varies a great deal. Calderon (2012a, b) presents data to set the stage for this story starting with UNESCO statistics, then projects his own to give us a number for 5 years further than current data allow:

> Globally, the number of students who have undertaken studies at the higher education level increased dramatically over the period from 1970 to 2000. In 1970 there were 28.6 million students compared to 99.5 million in 2000, according to statistics from UNESCO – an increase of 248%. In a period of accelerating transformation in many facets of economic and human activity, this significant growth manifests the massification of higher education in a global context. Yet, the growth that is occurring over the 30 years from 2000 to 2030 is likely to be higher than that experienced between 1970 and 2000. The number of students enrolled in higher education by 2030 it is estimated to increase from 99.4 million in 2000 to 414.2 million in 2030 – an increase of 314% over the next 30-year period. If an extra 5 years are added to these projections, the number of students pursuing higher education by 2035 is likely to exceed 520 million. Based on the projections that have been considered, the number of students is likely to reach the half a billion mark somewhere around 2034–35.

Thinking of these numbers in the context of India is, particularly, interesting as India is on track to be the country with the second-largest number of students enrolled in higher education. Calderon presents the following:

> Interestingly the region that will stand out in 20 years or thereabout is South and West Asia. In 2000 the region had 12 million enrolments – or a share of 12% globally, increasing to 21.4 million enrolments by 2009 (a global share of 13%). By 2035 it is likely that South and West Asia will have about 125 million enrolments in higher education – a global share of 24%, making it second in terms of the region with the highest number of enrolments. In part the growth in importance of this region is associated with the size of its population and economic development which is second to East Asia and the Pacific. India will remain as the world's second in terms of the number of enrolments.

India will be second only to China, and Calderon's statistical breakdown is important to acknowledge when thinking about the global landscape of higher education, especially to place things in context. But pure numbers do not always tell the whole story, as hypothesis 1 presents to us the idea that although there may be a greater level of higher education enrolment, the quality is often sacrificed which in turn leads in the long run to the opposite outcome that of greater inequality. Neubauer and Hawkins point out via hypothesis 1 that India and China will see the largest of this inequality as they are places where there are already "significant patterns of income and social inequality both in urban populations and between urban and rural populations".

What Does Massification Look like in the Indian Context?

India is a land of great contrasts as well as diversity. Contrasts between the mountainous regions and the coastal area, linguistic variety and religious multitudes are substantial, and socio-economic status ranges from those who make less than USD1.25 per day to those deemed billionaires (three in the 2015 Forbes list) (Peterson-Withorn 2015). This contrast spreads its way into the educational arena as well with the massification of higher education being a hot topic of the 2000s. With a population of over 1.2 billion, according to the United Nations and 18% of this population aged 15–24, the growing market for higher education continues to be overwhelmed, not only by Indians (but the Indians are the ones most directly impacted) but also other students from the subcontinent as well as the Middle East, and more recently Africa as illustrated in the UNESCO Global Flow of Tertiary-Level Students Interactive Map.

Why is the demand for higher education now increasing? There has been a constant shift from rural to urban living and the respectively needed new skills along with an exponential growth in the school-going population. This school-going population then translates into a student population ready for entry into higher education institutions. Higher education is seen as a practical means for upward mobility in the job market as well as a status symbol professionally and personally as higher degrees are prized possessions to highlight when seeking spouses. Education is no longer a purely elite endeavour with more and more students from the new middle class and some from lower echelons seeking higher education. This increasing demand on an overwhelmed, infrastructurally poor higher education system makes massification only natural, but to what end? How is India both in terms of its citizens as well as its government going to cope with the constant push and pull between what students want and need, what direction the government is able to lead with and the inevitable murky middle which is the daily reality?

The massification of HE in India is a double-edged sword with highly arguable key points that validate both hypothesis 1 and 2 and many of the same challenges that India faces overall are displayed on a smaller scale in the HE Industry. This chapter will present both the benefits and constraints of the massification of higher education in the context of India and provide some ideas for further discussion on both sides of the debate.

History of Higher Education in India

In India like many other countries, education was initially a byproduct of religion. Religion, Maths and Logic were initially taught at Hindu and Buddhist learning centres of Taxila (present Pakistan) and Nalanda (present India). The Brahmins were the original educated group, but over time, education evolved into a public good and was broadened in scope to all groups. Initially, different subjects were taught to

different groups of people based on cast but then opened to almost all (Chakrabarti 2007). While there is a long history of education and higher education in India, universities, as we think of today, started under the British Raj (1600–1947).

> India's university system as it exists today started in 1857 with three essentially British creations taught in English – the Universities of Madras, Calcutta and Bombay. At the time of independence (1947) there were 20 universities and 500 colleges with 0.1 million students. (12 Five Year Plan). Much of the higher education system in India retained a British legacy. But now in 2015, there are more than 700 universities and 35,000 colleges catering to more than 30 million students spread across every state and union territory. (Manuel 2015)

These newer institutions are also moving away from the colonial legacy and run the full range of government-sponsored public institutions as well as private institutions funded by independent donors. In fact, at present, the fastest sector for growth is the private university industry. This private university industry growth, however, can often leave much to be desired, a theme presented via hypothesis 1, point 7 of the introduction that most of the growth is in "exploitative demand absorbing private institutions". While this is the general trend, it must be noted that not all private institutions are exploitative and there are some that do commendable work, but these are the anomalies.

Brief Overview of the Educational Pipeline and Governing Structures in India

This explanation of the pipeline is important especially with regard to access to test preparation for universities and understanding the sheer number at hand competing for seats. In addition, this section will lend some clarity to the various entities at play in the HE dialogue in India.

Governing Bodies

Education in India is under the governance of the Ministry of Human Resource Development (MHRD). The MHRD is subdivided into two main structures—Primary and Secondary Education and Higher Education. Each of these two departments is then further broken down into several, essentially, subcommittees. This organization has created the current higher education classifications of Central Universities, State Universities, Private Universities and Deemed Universities. The MHRD has also created the University Grants Commission, which is essentially the overseer of all universities. The meaning of each of these types of universities may seem a little confusing so in the simplest reiteration, each of the major university types can be broken down in the following manner: Public, Private and Mixed. Mixed is the idea of a blend of both characteristics of public and private universities. Central Universities

and State Universities are both public, the major differentiation being that central universities are created by the parliament, run by the state and funded by the UGC. State universities are a product of state legislation.

Private universities are explained as "Universities established through a state or central act by a sponsoring body which can be a registered Society, Trust or Non-profit Company. Unlike public universities, they do not have the powers to affiliate colleges but they do have license to set their own criteria for admission, syllabus, etc." (Manuel 2015).

In the mixed category, we can place the Deemed Universities and the Institutions of National Importance. Somewhat unique to India, a number of private universities that the Indian government then determined contribute to the Indian Education Field (Chakrabarti 2007). The UGC has deemed them "high performing", as simplified by Powar, "deemed-to-be-a-university" and most often self-financed. Last, there are the Institutions of National Importance and Premier Institutes of Management, for example, IITs and IIMs, along with Polytechnics, Teacher Training Institutes, and Nursing Institutes which have their own primary governing body and are only partially under the UGC (Manuel 2015). These are also created by an Act of Parliament.

Where do the students come from before entering higher education? Most students will spend 10 years in primary and secondary school followed by upper secondary for 2 or 3 years which then leads to higher education for 2 or 4 years depending on the programmes, and then if previously on the Bachelor's path, one can move on to Master's or Doctoral work. At the end of the 10th year, a major exam is sat leading to one of the following credentials: SSCE/Standard 10/ICSE/AISSE issued by the State or National accrediting bodies or an internationally recognized certificate such as IGCSE/O Levels/IB Middle Years Programme. A caveat, however, is that most students studying at the later level plan to study abroad for their bachelor's degree, and thus self-select to take themselves out of the competition for Indian HE institutions. Those students that choose to stay in Indian HE will face another round of grueling examinations which will ultimately decide which Indian HE institutions they can be eligible to apply for.

Depending on their results of the grade 12 examinations in the Indian curriculum context, students can then enter certain levels of university. This is no simple feat as described by Mishra in her 2011 article "Only students who score 100% need apply". This article essentially showcases the state of current educational fervour where top Indian HE institutions are searching for ways to further separate the better from the best as an ever-growing demand and limited supply of seats remain at a standoff. While scoring 90% and above is a difficult and noteworthy task, the number of such students still remains higher than seats available; thus universities have resorted to seemingly impossible application requirements. In addition, as posed in hypothesis 1, Sect. 9, while there has been a focus on expansion in higher education, secondary education is not being supported at an equivalent scale in many places, India included, thus leading to the creation of secondary graduates who are ill-prepared for HE admission, and subsequently the curriculum they will follow at university. This, in turn, has actually led more students, even on the national curriculum track, to seek an education abroad in which many times it is easier to attain admission abroad than stay

in India. Most Indian undergraduate degrees are 3 years with some 4-year options. In 2013, the prestigious Delhi University attempted to move from a 3-year programme to a 4-year programme; however, this did not last, and since then Delhi University has reverted to a 3-year Bachelor's degree (Mukul and Gohain 2014). Master's and Doctoral programmes are open to students post bachelor's. In this scenario, a case can be made for hypothesis 2 that despite all the issues with HE, long-term equity and equality will be positively impacted in India as a whole as the trickle down effect of increased HE is an overall long-term increase in the human capital and talent pool in India.

What Has Been the Impact of the New Government?

We are currently in the 12th Five-Year Plan (2012–17). At the end of the 11th Five-Year Plan, even with a monetary increase in educational spending, there were substantial unfulfilled promises. The increased allocation to the educational budget was spent on preexisting programmes, and not on the creation of new HEIs. The educational budget fluctuations continued in recent years with 2011–2012 seeing an increased higher education budget by 34% (Mishra 2011), but the 2014–2015 fiscal year higher educational budget went down (Kumar 2015a, b); however, most recently, the 2015–2016 educational budget is earmarked to go up with many new promises of educational reform specifically for higher education (IANS 2015).

The UGC mentions that the only factual measurement available to dictate the success of the 11th Five-Year Plan between the 11th and 12th Five-Year Plans was the Gross Enrolment Ratio, which markedly went up. Yet, the other goals remain harder to quantify. The 12th Five-Year Plan has 23 specific areas of focus that the UGC has deemed as areas that need follow up and improvement.

The Gross Enrolment Ratio (GER) while growing in India still remains much lower than the world average, the average of developing nations and developed nations as per the UGC 12th Five-Year Plan. The government also notes that the GER cannot be the only measure of policy outcome.

It is also suggested that bureaucratic red tape be limited such as the current state of colleges requiring affiliation to universities, which is just one example. There is also a major push to eliminate disparities such as gender imbalances, rural–urban divides, and inter-regional biases. Additionally, there is a hope to eliminate the current skewed popularity of technical and professional education.

Furthermore, there is also a quest to continue to strive for quality and excellence across multiple platforms as first brought to attention in the 11th Five-Year Plan in subsects such as "academic, administration, curricula, pedagogy, program offerings, research" and the "promotion of excellence in higher education including good governance" (12th Five-Year Plan in India). There is also a desire for higher education to be more learner-centred and attention be given to how else to define and execute expansion of this sector other than solely from the point of infrastructure such as more buildings for the universities and colleges or dormitories for students. Education is

now seen as a public good, but, public money (Central and State funding) often comes with many strings attached and it takes time to disburse funds and move to execute decisions due to bureaucratic red tape (Kaul 2006). Building upon public–private ventures or expanding private educational ventures will likely be more efficient for the immediate future. An interactive heat map created by Thomas Manuel is a great illustration of the mushrooming of private institutions over time.

Key Issues as Highlighted in the 12th Five-Year Plan

It is hard to understand the full breadth and depth of the 12th Five-Year Plan without directly referring to it as an important way to see the mindset of the leadership. The 12th Five-Year Plan has very detailed recommendations on what to do to fix the issues of equity and expansion in HE. Twenty-three key issues have been acknowledged by the UGC and solutions are slowly being implemented. The 23 points provide a blueprint for success taking into consideration improvements to the 11th Five-Year Plan as well as new initiatives. Major areas of thematic focus are access, infrastructural concerns, promotion of equity, reduction of imbalances, improving financial support for students and universities, financial reform, accountability for financial support, quality control, faculty empowerment and leadership development, capacity building and enhancing, curricular reform, private sector inclusion in HE, vocational and skills training, better coordination and implementation and continued support for HE.

What we see vis-a-vis these 23 points is that there is definitely a desire to move forward via the government that touches upon all major areas of concern. In the latest budget of the union speech by Finance Minister Arun Jaitley in February 2015 he states:

> Educating and skilling our youth to enable them to get employment is the altar before which we must all bow….I had indicated my intention to provide one major Central Institute in each State. In the fiscal year 2015–16, I propose to set up All India Institutes of Medical Sciences in J&K, Punjab, Tamil Nadu, Himachal Pradesh and Assam. Keeping in view the need to augment Medical Sciences in Bihar, I propose to set up another AIIMS like institution in these States. I propose to set up an IIT in Karnataka, and upgrade Indian School of Mines, Dhanbad into a full-fledged IIT. I also propose to set up a Post Graduate Institute of Horticulture Research and Education in Amritsar. IIMs will be setup in J&K and Andhra Pradesh. In Kerala, I propose to upgrade the existing National Institute of Speech and Hearing to a University of Disability Studies and Rehabilitation. I also propose three new National Institutes of Pharmaceutical Education and Research: in Maharashtra, Rajasthan, and Chattisgarh; and an Institutes of Science and Education Research in Nagaland and Odisha. I also propose to set up a Centre for Film Production, Animation and Gaming in Arunachal Pradesh, for the Northeastern States; and Apprenticeship Training Institute for Women in Haryana and Uttrakhand.

His speech is a testament to the strong desire for investment in HEIs and to rectify many of the key issues from the 12th Five-Year Plan, which also absorbed that remained unfinished from the 11th Five-Year Plan.

International Endeavours

In September 2014, the first bilateral summit between Prime Minister Narendra Modi and President Barack Obama took place in the United States during which a new leaf was turned over for India–U.S. relations with the creation of, "Chalein Saath Saath: Forward Together We Go" as a policy. The joint declaration, endorsing the first vision statement for a strategic partnership between the two countries, is meant to serve as a guide to boost cooperation between the two in various sectors, including higher education, over the next decade (Ravi 2015). This can be viewed as a synopsis of the New Indian Government's views on international cooperation, specifically in the context with the United States.

This is just one of the ways that India hopes to expand international exchange on its higher education campuses. There is a need that has been recognized to make India more competitive globally and one way is to internationalize the higher education sector. Certain global institutions have expressed interest in opening branch campuses, but there is still a level of scepticism among top foreign universities that India (or any other place) would be able to truly match the level of education afforded at the home institution and India also has a well-earned reputation for bureaucratic red tape (Mahajan-Bansal and Prasad 2010). Baily also provides critical information on how the US–India partnerships in higher education impact those who are currently on the periphery of educational access to higher education in India which is of utmost importance in the current Five-Year Plan (Baily 2015).

India seeks to rise as a globally recognized education centre but, clearly, this is a slow process (Kumar 2015a, b; Sengupta 2013). With India, however, projected to rise to having the second-largest number of enrolments (Calderon 2012a, b), it needs to find a way to properly absorb these students so that there can be a promising societal outcome as opposed to a simple continuation of the status quo, where it is recognized that there is much room for improvement, but yet it is challenging to execute the necessary steps. The latest government has certainly improved the perception of India in the global arena with an increased push for bilateral agreements with key international players; however, as we sit midway through the current 12th Five-Year Plan, it is still uncertain as to how much measurable progress is being made and what indicators aside from the GER will be used to determine outcomes. One of the contextual conditions of the introductory chapter is that growth of the higher education industry can, in turn, play an important role in regional cooperation. If India is able to find a way to absorb the number of scholars it is producing, it can more positively impact regional cooperation. But first, there need to be comparable reasons for scholars to stay in India (as opposed to the current brain drain).

Reasons Why Massification Is Helpful in the Case of India

There are not at present enough universities to absorb the number of students who wish to pursue bachelor degrees or further their studies in India. Having more liberalized policies to increase the number of private universities would allow for more seats as well as diversity of thought as many of these new institutions model themselves after American liberal arts universities which are quite different from the current higher educational system in India where students are still predominantly tracked into fields on the basis of grade 12 school leaving exams and college entrance exams for other institutions. An example of an Indian college that fits the description of an Indian university modelled on a US liberal arts college is Flame University in Pune, Maharashtra. Massification and creation of universities such as Flame would allow for the absorption of students who may otherwise seek to go abroad, perhaps even those opting for an international curriculum in K–12 or at least 9–12 or 11–12.

Most of the enrolment growth has also been seen in the private university sector (Ernst and Young and British Council 2014). Unlike in the US, private universities in developing countries like India are often still seen as the less prestigious option; and the elite private institutions continue to represent a chasm between the haves and have-nots as stated by Powar: "For the 'haves' they provide a solution to the problem of access. For the 'have-nots' they are a social evil, responsible for widening the economic and social divide". If we are to agree with Powar, then massification of higher education will not level the playing field in India—a view more in line with hypothesis 1. Will massification diminish elitism or create a new brand of elitism? In line with Powar, if everything still has a cost attached and the most elite institutions require knowledge plus money, then indeed a new chasm will remain to be crossed (Powar 2015). Given the massive population of India, there will always be haves and have-nots. In the recent past, however, it is only the private university world in which the most growth can be reported as they can often move quicker than institutions fully funded by the government.

Having increased access is important on so many different fronts. India has the second-largest number of students going abroad. At present, India is second only to China in terms of sending students abroad for tertiary education, at 181,872 students (UNESCO 2015). Just think what this could do for the country's overall economic growth potential if these students were able to find seats in quality institutions at home. Currently, the top three recipients of Indian students are the US, the UK and Australia. Could this be one of the reasons that enrolment at HE institutions in India remains much lower than other global counterparts?

From an economic standpoint, students who manage to stay in India for education are also likely to stay in India for work and hopefully long-term counter some of the effects of the current brain drain trend seen there. Studying abroad is often the first step in permanent emigration. Once the students are well settled abroad, it is very difficult to readjust to life in India. Narendra Modi touched upon these issues in his September 2014 Madison Square Garden Speech and hopes to counter this phenomenon. Modi has been instrumental in changing the perception of India in the

world and has gone to great lengths to open dialogue with strategic partners. He has already undertaken his second state visit to the United States and supported several opportunities for cooperation between the two such as the Obama-Singh initiative as a testament to providing more opportunities for internationalization for students, research and faculty and staff to make Indians globally competitive in the educational arena as well as GIAN, the Global Initiative of Academic Networks formalized during Obama's 2015 visit to India. During Modi's second state visit to the US bridging the digital divide in India was the focus and how a digital India can in turn bridge the education gap. Yet, not all academics are positive about the reforms under the Modi administration feeling that the reality of the state of education in India is a far cry from the promises made (Mishra 2015).

On issues of access, India pales behind its neighbour China which has been able to successfully implement higher education reform (Ravi 2015). There are three main areas of access that massification can help address: gender, minorities and regional. From a gender perspective, more seats will hopefully lead to less competition for seats between the genders. India is a country that still has a huge bias in favour of the boy child; resources even in middle classes and above are often pooled for use by the boy child leaving the girl child to fend for herself if the opportunity for further education is even offered. Minorities are at a distinct disadvantage as they are on the periphery for educational opportunities even in the K–12 arena making it highly unlikely that minorities be it ethnic, linguistic, or regional will be able to even reach the higher education level. Regional access is also something that will be helped as most universities today are clustered around a few major metropolises leaving those living in the remote areas such as the far north and northeastern regions practically devoid of HEIs. With massification the hope is that these groups and regions will no longer be forgotten.

Another point to consider is that with the creation of several new HEIs there will be a boom in education-related employment and this will lead to the creation of thousands of new jobs which will help India's overall economic development. There is also a trickle down effect in the creation of new jobs as the new employment opportunities will not only be in the HE industry, but over time will create more employment in college and career advising in the 9–12 grades, especially as there are many first-generation college goers—both first generation to stay in India and go for an undergrad degree as well as first generation to go abroad for college (Jain and Ramya 2014). An additional new player to the educational industry is educational loan opportunities which many families are seeking for their students (Sharma 2012).

In 2014, the British Council identified five states with extreme growth potential: Gujarat, Karnataka, Odisha, Tamil Nadu and Punjab as great places to build more universities and international collaboration. These states were previously lesser populated states but are now on a high growth trajectory and would be great places to make education more accessible.

The University Grants Commission states the following: "Higher education in India is passing through a phase of unprecedented expansion, marked by an explosion in the volume of students, a substantial expansion in the number of institutions and a quantum jump in the level of public funding. The enormity of the challenge of

providing equal opportunities for quality higher education to ever-growing number of students is also a historic opportunity for correcting sectoral and social imbalances, reinvigorating institutions, crossing international benchmarks of excellence and extending the frontiers of knowledge. The 12th FYP shall focus on utilizing this historic opportunity of expansion for deepening excellence and achieving equal access to quality higher education." Clearly, from the government perspective, the expansion is seen in a positive light. In fact, if executed properly, this is also an opportunity for India to become a regional hub if theory can be put into practice as in the case with the UAE for the Middle East and South Africa for Sub-Saharan Africa. There are already many students from Nepal and Bhutan as well as Sri Lanka, but certain middle easterners as well as students from Iran are looking to India (UNESCO 2015).

Every Coin Has Two Sides: What Is Wrong with Massification in India?

Academics feel that the new government including its policies on the expansion of HEIs has not yet led to the outcomes that were hoped to be achieved to date (Mishra 2015). The rapid growth of higher education as an industry has led to diploma churning institutions that are often understaffed from a standpoint of literal numbers—those available to teach—as well as from the perspective of training. Professors at many of the new institutions are underqualified for a variety of reasons, some of which were alluded to earlier such as the brain drain phenomenon, thus far of India's best and the fact that teaching is not as lucrative as many other up and coming industries in the country such as IT or teaching abroad. In many cases, for every desire for international bilateral and multinational exchange of ideas, there is the equivalent lack of desire to work with colleagues in the country (Raj 2013). The same problem exists on the side of the students. A new growing middle class has made its presence to fill the HEIs…but do filled seats equal quality?

Top students still want top schools either in India or abroad and, therefore, continue to separate the haves from the have-nots, with the more elite students being better prepared as they continue their foray from elite high schools to elite institutes of higher education. The age-old dilemma of quantity versus quality is rampant on the side of both students, faculty, and staff as massification is not affecting only the faculty and administrative side, but also brings to the debate the quality of students. From a student perspective, is a university degree from a non-elite institution still going to bring the same return as that from an elite institution? The increasing demand in higher education has affected all levels of the pipeline with an increasing number of high schools to feed this frenzy. Just visit the International Baccalaureate Organization's webpage and see the number of internationally focused high schools being added to India each year. This is a way to acknowledge the demand for an

internationally standard competitive curriculum as students and families continue to demand a pathway to an international bachelor's degree.

Enough properly trained human capital is just one of the factors missing from HEIs in today's India. Another huge issue to tackle is infrastructure. Huge strides need to be made in areas of infrastructure as mentioned in the 12th Five-Year Plan, from the obvious, such as the basic buildings themselves, technological updates, and basic acquisition of land for such institutions, to the more nuanced such as having adequate gender-appropriate housing. To take this further, in the remote regions, it is not about only creating an institution often times from scratch but also the full infrastructure needed to reach such places including new mobile towers and roads to reach the HEIs.

Higher education is now an industry, and like any industry, the bottom line is what is important for most institutions. Learning for learning's sake is gone and the massification of HE has led to the creation of a much more lucrative industry than in previous years. India like its neighbour China has become the target of many HEI goals, especially when it comes to recruitment for overseas programmes and now, much new discussion has been had as to set up branch campuses in India such as those in Abu Dhabi or Singapore. It is a much slower process in India with bureaucratic red tape abundant. In addition, Indian universities, albeit mushrooming, still are subpar when measured against global powerhouses as evidenced by the QS World Rankings where Indian universities only show in the top 500, not even the top 200 (Ravi 2015).

Will Technology Be the Saving Grace?

While many see the addition of technology as the saviour of educational inequality, Toyama presents the idea of the Law of Amplification which states that "While technology helps education where it's already doing well, technology does little for mediocre educational systems; and in dysfunctional schools, it can cause outright harm" (Toyama 2015). He also mentions that it is an issue of scale. Techniques that work at small scale often fail miserably when amplified. This is a particularly interesting standpoint in the case of India as growth of online distance learning programmes and massive online open courses (MOOCS) is often debated as a way to equalize access. For example, can models like Devry and the University of Phoenix work in India? One problem is that only not for profits can award degrees and the HEIs must currently have a classification as a not for profit trust as it is widely feared that for profits will just be in it for the money with no way to regulate the quality of the institution. Another issue is that accreditation and monitoring of these programmes need to be done more firmly. AICTE has its hands full already with the brick and mortar operations. How will it evaluate possible virtual operations? Will it have the manpower necessary? At the same time, distance learning can be seen as a viable and cost-effective way to level the playing field in lesser populated remote regions of India as well as a way to provide a sound education (if all the other issues are managed) at a minimum cost, thus making education accessible to even the poorest

who would only need to connect to the internet sometimes even with just their mobile phones, eliminating even the cost of a computer. Yet, Toyama warns that technology is only as good as those who teach it.

New Higher Education Models for India

As India grapples with much change in the HE industry, could there be room for growth via the Community College model for vocational training? Could we change the 10 + 2 model such that +2 resembles more of an American Community College? In order to get the wanted output of students at the tertiary education level, we must also address the pipeline. In order for students at the tertiary level to succeed, they must have tools afforded to them at the K–12 level to prepare them for University. Can more government spending be allocated for education at all levels of K–12 as well as HE to sustain a more educated and prepared student population that will be successful in their higher education endeavours? A 2013 white paper by the Institute of International Education provides insight that indeed further adaptation of the American Community College could help meet the workforce needs of the world's third-largest economy (Jha 2013).

Voices from the Ground

As a former recruiter and admissions counsellor for a large private research institution working specifically with students from India, I have been able to see first-hand how massification has affected not only students in higher education but the pipeline below. International schools preparing students in India for elite global learning opportunities have boomed at an almost alarming rate. Just as in HE, it can be argued that there is a shortage of qualified staff both in terms of teaching and counselling and administration even at this level to properly engage all students at school. The question of sustainability is also brought to attention as for how long can this growth be sustainable? Students face an overwhelming amount of pressure to reach unrealistic school leaving exam scores which are the basis for university entrance in India. In fact, entry requirements to elite institutions in India have become so tough (Mishra 2011) that the very students who are unable to secure entry into an elite institution at home, often easily make it to top global institutions, including the ivy league schools of the United States and Oxford and Cambridge in the United Kingdom.

The academically advantaged are sought after globally and Indians make up the second-largest group at most universities in the US after the Chinese (Fischer 2014a, b). Some of this can be attributed simply to population size, but also because of other socio-economic reasons such as the relative power of the rupee in the current educational marketplace and the value placed on education in the Indian community. Entire families will reorganize their lives to help their children succeed academically

and give them the best tools to succeed that the family is capable of. Educational loans are more frequently sought and commonplace. This, of course, is manifested in different ways depending on income, but, the value placed on study and success via education is just one of the reasons that makes Indian students more sought after. It is no secret that the Indian Higher Education system at present has no way to absorb the full population of students ready for higher education and this has also led to heavy recruitment from around the world of Indian students. While the United States and the United Kingdom remain top destinations, Canada, Australia, New Zealand, Hong Kong and Singapore have quite a large Indian student population. Recent newcomers are Germany and other smaller European nations. Why are students interested in these opportunities? There is a dire lack of top-quality globally recognized institutions in India (Altbach 2014).

These opportunities are seen as a stepping stone for further studies, and students are seeking scholarships—often viewed as prestigious even if money is not needed. Some of the same students unable to get admission in an Indian elite institution are the very students being sought after abroad. This is a very different feel from Indian institutions in the sense that many times the students feel that they are not good enough, but abroad they are being courted. And who does not want to feel loved (Duttagupta 2014)? This courtship, however, this lure of a better opportunity is what is also hurting India as often its best and brightest are being lured away. This is a phenomenon not only affecting the undergraduate arena but also graduate programmes as well (Fischer 2014a, b) as Indian students retained the number 2 rank for students studying abroad for graduate school. The brain drain phenomena is nothing new, but historically has referred to other industries. Now its ramification is being felt in the higher education industry which then has a ripple effect across multiple sectors.

So Can a Conclusion Be Drawn—Are There Clear Indications as to How India Will Fare?

The topic of massification of higher education can be simplified into two basic camps, with those for or against. However, India is unique in that there are clear indications that India needs massification to grow (Times Higher Education 2013); there is also a temporary stop-gap in that in the short term, there will be an increase in inequality until the infrastructure is created to truly and fairly absorb all students who wish to actively pursue higher education. The long-term outcome is one that leans more on the side of the second hypothesis presented in the introductory chapter that over time, these changes, however, challenging in the short term will increase long-term equity and equality, not only for citizens in the country, but also for the country as a whole who will finally be able to retain the best and brightest their country is producing as opposed to the current situation where the best and brightest (students, faculty and staff) are incentivized to leave the country to pursue greater opportunity elsewhere.

In fact, this was one of Narendra Modi's guiding ideas as he addressed the American people at Madison Square Garden shortly after taking over the seat of Prime Minister. Modi acknowledges India as a "youthful nation with a very old culture". Specifically, 65% of the population was under 35 at the time of Modi's speech in 2014. He then went further to say that "India will progress very fast and the skills of our youth will take the country ahead".

India seems to lend itself to more questions than solutions. Will other government and private partnerships survive the bureaucracy? Will the PPPs (Public Private Partnerships) be a solution? Can India come to an understanding as to how to simultaneously achieve accessibility, equity, affordability and quality? Huge monetary investment is necessary by the government, not just private universities to keep students home (Altbach 2014). Neighbouring China has become an enviable success story on this front, gaining international recognition and giving Chinese students a reason to stay in the country and not feel like they must leave for a better education.

Will India reach an understanding that moves beyond theory to practice? The case of India resonates more strongly with hypothesis 2. Yes, each of the issues presented in hypothesis 1 holds true, but over time, it is abundantly clear that the sentiments of the nation are that in the long run, a massified system will increase equity and equality. How will India fare? Both the people and the government (as shown in the latest five-year plan) have a desire to move forward, increasing equity, access and quality. Yet, some of the issues impacting HE are systemic to India as a whole and without the underlying deeper seated issues being rectified nationwide in all spheres, it is unlikely that industry-specific rectification will be managed (corruption, poverty, overpopulation and lack of infrastructure). But, where there is a will there is a way and only time will be the ultimate truth teller. All stakeholders agree that something needs to change…but now is the time to decide what and how.

The year 2022 will mark the 75th year of Indian independence. Under the guidance of a government that recognizes the importance of harnessing the human capital of the country vis-a-vis HE, I am hopeful that 2022 will also mark the year where there is true freedom of thought, equity, access and quality in higher education in India, benefits that support the introductory statement presented by Hawkins and Neubauer that massification is generally thought of as increasing access both as a process and result, therefore increasing the extent of equity and equality. I am hopeful that 2022 is a year in which we will be able to more accurately measure the success of the plans of the current five-year plan and begin to see the long-term benefits of massification of higher education in the context of India.

Appendix

12th Five-Year Plan Key Points

1. The focus will be towards achieving higher access through expansion by consolidation and better utilization of the existing infrastructure, upgradation of the infrastructure as and where necessary, and creation of new institutions primarily to meet the objective of regional equity.
2. Increasing and enhancing access through a mission mode national programme, "Rashtriya Uchch Shiksha Abhiyan (RUSA)" aimed to achieve 25% national-level GER which will include (a) upgrading of Autonomous Colleges, Colleges with Potential for Excellence, and A grade-accredited Colleges by the National Assessment and Accreditation Council (NAAC), as university-level institutions; (b) promoting evening universities/evening colleges; (c) introduction of undergraduate programmes in the universities as integrated undergraduate/postgraduate (UG/PG) programmes; (d) enhancing the intake capacity of the existing institutions of higher education; (e) developing the 'College Cluster Universities' regionally; and (f) establishing "Meta University Complexes" in association with public/private sector undertakings as a part of their corporate social responsibility, on an industry-academia mode. Inclusive and Qualitative Expansion of Higher Education 3.
3. The strategy for promoting equity at all levels and all branches of higher education, from enrolment to pass-out stage, shall be through new schemes for financial support of socially deprived groups, minorities and women, along with significant remedial support for such students and faculty.
4. Schemes for reducing regional/disciplinary/gender imbalances will include (a) setting up of a large number of Polytechnics (1000); (b) completing the establishment of 374 Model Colleges in the identified Educationally Backward Areas of low GER districts; (c) establishment of 800 Constituent Colleges in the already existing 40 Central universities and (d) establishment of 20 exclusive universities for women.
5. The system of financial support to girl students and students from SC/ST, Minorities and the Other Backward Category (OBC) category is proposed to be considerably enhanced at all levels of higher education and for all branches, including professional and technical education. Financial support will be expanded in the form of scholarships, transport/rent allowance, book banks and a fee-plus scholarship system for professional students.
6. In order to retain students from deprived social groups in the higher education system, postdoctoral scholarships will be enhanced and a fast-track methodology implemented.
7. There will be strengthening of infrastructure to provide access and retention of women students, differently abled students and students from socially deprived backgrounds.

8. A major emphasis will be the strengthening of the remedial system for students from socially deprived backgrounds in order to enable their retention and better performance.
9. Equal Opportunity Cells, which were initiated in the 11th FYP, will be set up in all institutions, including institutions covered under section 2(f) of the UGC 4 Inclusive and Qualitative Expansion of Higher Education Act. These will monitor and oversee the implementation of policies and programmes for the weaker sections and their progress in their respective institutions in achieving social inclusion.
10. Promotion of quality would be through a greater focus on performance, curricular reforms, better human resource management, schemes to promote high-quality research and a technology-assisted monitoring mechanism. National science experimentation facilities, particularly in the cutting-edge areas will be set up as Inter-University Centres and University-housed Networking Centres to provide international-quality resource support to all the researchers and PG students.
11. Faculty being the single most critical factor responsible for the overall quality and excellence in higher education, it is a matter of grave concern that a large number of faculty positions remain perennially vacant due to either non-availability of suitably qualified persons or due to procedural restrictions/fund constraints in State universities/colleges. In order to ensure that the expansion drive in higher education is sustained, initiatives shall be taken to attract and retain the best talents as faculty resources by creating a conducive working atmosphere and by making teaching and research a lucrative career destination through continuous central assistance.
12. The capacity building and capability enhancement, keeping in tune with the modern-day requirements of the faculty resources through the Faculty Talent Promotion scheme by upgrading the Academic Staff Colleges (ASCs) as Faculty Development Centres (FDCs) with redefined roles and responsibilities, would be another priority.
13. Equally important shall be the initiative for Leadership Development and Institutional Management programmes at all levels from top to bottom, for those who may be currently holding the five leadership, management and administrative Inclusive and Qualitative Expansion of Higher Education positions. For those in the leadership tiers who need to be readied to take over such leadership positions in colleges and universities in the future, a separate Leadership Mentoring Programme is envisaged through dedicated/competent centres.
14. Support for curricular and academic reforms to improve student choices, technology-assisted participatory teaching–learning processes and increasing the provision of relevant education, with an emphasis on a feedback-based holistic examination/evaluation system. A fine balance between the market-oriented professional and liberal higher education shall be the hallmark of such initiatives.
15. Minimizing the affiliating burden of the existing universities by implementing the "Affiliation Reforms Package" developed by the UGC during the 11th FYP

under a multipronged approach would be another added dimension of promoting access with quality and relevance.

16. To promote private sector participation in higher education, newer models based on quality shall be explored, supported and incentivized by well-defined policies, norms, and monitoring mechanisms. The initiative would also include maximizing the potential of Public Private Partnership (PPP) in higher education not only for setting up new universities and colleges but also for creating/sharing quality infrastructure and physical facilities in the existing colleges and universities.
17. To promote skill-based education and to improve competence, a fresh impetus to vocational education shall be given with due regard to the National Vocational Education Qualification Framework (NVEQF) and the initiative is to be supported and incentivized through well-defined policies and monitoring mechanisms.
18. Reforming the financing system of higher educational institutions by the UGC 6 Inclusive and Qualitative Expansion of Higher Education such as to promote the culture of accountability, improved performance and better resource use efficiency and at the same time respecting academic autonomy. A norm-based funding mechanism based on the justified requirements submitted by the universities and colleges with due approval of their decision-making bodies, (Academic Council and Executive Council) and moderated by the availability of resources with the UGC shall replace the existing conventional approach.
19. For better coordination and speedy implementation of the 12th FYP priorities, the UGC, as an organization, shall have to be restructured and modernized, and rejuvenated as a vibrant academic, administrative and fund providing/monitoring body by the introduction of a new management system of good governance which is a layer above e-governance, with transparency and accountability on the one hand and by roping in eminent academics on a full-time basis as advisers on the other, besides lateral entry/deputation-mediated administrative talent infusion. This shall enable the UGC to design the schemes better, execute them effectively and monitor the outcomes/outputs in a time-bound manner.
20. State Councils of Higher Education have so far been established only in a few states as interface bodies between the state governments, the universities of the State and the national bodies/councils like the UGC/All India Council for Technical Education (AICTE), etc. In order to facilitate national-level coordination of the higher education schemes/policies and their speedy implementation, all states shall be encouraged and incentivized to establish and activate these councils. Similarly, the College Development Councils (CDCs) of the universities will be made more effective in channelling the UGC schemes to Colleges through the CDCs, supported appropriately by the UGC.
21. Universities and Colleges being the end users of the public funds, provided by either the central or the state governments, shall have to be made accountable for the funds, provided by introducing a New Educational Management System Inclusive and Qualitative Expansion of Higher Education 7, whereby

their accountability would be assessed more in terms of their performance and outcomes and less in terms of insistence on adherence to elaborate processes and procedures. Such initiatives shall have to go beyond e-governance, management information systems and enterprise-wide resource planning. They must seek to bring about changes in the systems, processes, culture, and structure of the university Act/Statutes.

22. State Universities and Colleges affiliated thereto account for an overwhelmingly large number of enrolments in higher education and it is this sector that has been least attended to in terms of resource support and subjected to external influences and pressures in the name of accountability. Enhanced resource support to this sector based on the commitment of the state governments to provide these institutions greater autonomy and operational flexibility shall be a priority during the 12th FYP.
23. A large number of new Central Universities and Model Colleges that were established during the 11th FYP would require continued and accelerated support because during this Plan they are likely to fast pace their development and operational work and any resource constraints at this juncture would be detrimental to their growth and development.

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Chapter 6
The Emerging Face of Higher Education: An Analysis of the Malaysian Context

Mariani Md Nor and Adelina Asmawi

Introduction

Globalization and internationalization are and have been permeating through developing countries over the past years. We all know that these have been precipitated by the facilitation of global communications through technological advancements as well as socio-economic, political and environmental developments. This diffusion of globalization and internationalization has reached higher learning institutions across Asia and is expected to affect these countries' economy, life expectancy, knowledge, education and not forgetting investment opportunities. Globalization and internationalization have in fact become driving forces behind these countries' development.

As such, what are evident now are the changes in higher learning institutions in Asian countries, for example, Malaysia. Higher education in Malaysia began with the formation of the University of Malaya in 1959. Malaysia attracts students from many different countries around the world. It has become an international hub for education because of its list of programmes which are comprehensive and internationally recognized. Higher learning education in Malaysia is also among the most affordable, making these institutions a destination for international students (Independent Education Consultant 2014a, b, c). To date, 20 public universities have been established in Malaysia to cater for the increasing needs of business and industry (MOE 2014) and 47 private higher learning institutions can be found across the country (Independent Education Consultant 2014a, b, c).

While the private ones are run by private bodies, the public higher learning institutions (other than those abroad) are those which educate the best Malaysian students. Private colleges began to emerge in Malaysia in the early 1980s but started to mushroom only when the Private Higher Educational Institutional Act (PHEIA)

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was enacted in 1996, allowing the private sector to enter the higher education market. There are now about 600 private higher learning institutions including 11 private universities in Malaysia that complement the work of public institutions in providing higher education.

The presence of a large number of foreign programmes in Malaysia has yet to lead to the expected trade benefits and Malaysia is already making progress in its quest to become a net exporter of tertiary education by 2020 (Malaysia 2006). Studies have shown that there has been a rapid growth in the number of international students studying in Malaysia, jumping from 5635 in 1997 to 45,636 in 2008 (Lee 2009). Similar to many developing countries across the world, education at the highest level in Malaysia is used as a vehicle by the state for the nation-building agenda that promotes national unity, alleviates poverty and bridges the social disparity gaps. Bearing this in mind, as well as the massification of higher education, the increasing cost burden and the global trends in restructuring higher education, the government response can be seen in various policy initiatives that are paving the way for the liberalization and privatization of the higher education sector (Morshidi 2006).

Higher Education in Malaysia: The Challenges

In Malaysia, massification is not as much a major concern as increasing the 'visibility' or internationalization of local universities. What has emerged in the past years is a race for internalization and improved rankings by most public universities in Malaysia. Take, for example, the University of Malaya, Malaysia's premier university—in just under 5 years, it has surged up the ladder of international rankings, improving its position to 151st in 2014 by QS World University Ranking (Top Universities 2014). It was ranked 169th in 2005, 192nd in 2006 and 180th in 2009 and has continued improving its ranking over the past few years (Kana 2014). Such a position is a result of a steady pattern of improved academic programmes, research, publications, networking and international student and staff programmes.

At public higher learning institutions, all academic programmes and curricula undergo rigorous review after 3–5 years, following strict quality standards prescribed by the institutions and the Malaysian Ministry of Education. This review takes into consideration programme effectiveness, needs, relevance, graduate marketability, teaching and learning practice, assessments and so forth, with a vision to provide quality graduates for the national and international workforce.

> In order to compete with the best in the world, our education system must develop young Malaysians who are knowledgeable, think critically and creatively, have leadership skills and are able to communicate with the rest of the world. Just as importantly, our students must be imbued with values, ethics and a sense of nationhood, enabling them to make the right choices for themselves, their families and the country with a view towards enduring and overcoming life's inevitable challenges.

(Malaysia's Minister of Education and Deputy Prime Minister, Malaysia Education Blueprint, 2012, p. 8)

Massification in higher education is characterized by the following dynamics of international importance: it is a universal phenomenon; national systems are having to cope with an increasingly global marketplace; institutions are facing state power to ensure policy goals; and there has been a shift in the balance between public and private financing in favour of the latter. In response, institutions have widened their search for market funding, as seen in the rise of for-profit universities, accompanied by a marked increase in trans-institutional cooperation and the rise of massive open online courses (MOOCS) (Jongbloed and Vossensteyn 2016).

With respect to private higher institutions, massification is present in countries where the provision of public higher education has been limited to relatively few institutions of high academic standing. The excess demand for higher education in these systems has been absorbed through the rapid expansion of private institutions. In most mass private sectors, the majority of students are enrolled in private institutions. However, it is not the size that matters but the character of the private education. The distinctive feature of mass private sectors is the large percentage of students in low-cost, low-selective and usually low-quality institutions. Geiger noted that 'hierarchy is a prominent and inherent feature of mass private sectors. The peak institutions are usually the flagship national universities, but below the peaks institutional stratification depends upon much more than public or private status'. Older, mature public universities and colleges enjoy greater prestige and are usually seen as having higher quality than private providers (Arokiasamy and Nagappan 2012).

Private higher education institutions in mass private sectors depend mainly on tuition fees and are demand absorbing and market-oriented. They mainly offer a few career-oriented study programmes in high-demand fields, with mostly part-time academic staff and low tuition fees. The state plays a decisive role in sustaining such mass private sectors. States do so for a time in order to meet the demand for higher education, which the public sector is unable to absorb. In the majority of mass private sectors, the state does not subsidize private colleges and universities (Geiger 1986).

A major shift in the private higher education landscape in Malaysia since the mid-1990s has been the adoption of the higher education of foreign developed nations. Many foreign campuses have been set up in Malaysia to cater for local students and some international students. Malaysia is viewed as an 'educational hub' by foreign partners eager to collaborate with private education institutions to achieve a win-win solution (Arokiasamy and Nagappan 2012).

'Globalizing higher education' has been defined in numerous ways. This term is often used interchangeably with terms such as 'cross-border' higher education, 'borderless' higher education or 'multinational' higher education. The term 'transnational education' as defined by UNESCO generally refers to education 'in which the learners are located in a country different from the one where the awarding institution is based' (UNESCO/Council of Europe 2000).

Given the increasing competitiveness in the global marketplace, it is every Malaysian university's aim to produce global knowledge workers who are able to attain global acceptance. Institutions of higher learning in Malaysia provide professional, career-focused education offering courses that are up to date and market relevant (Independent Education Consultant 2014a, b, c). The Malaysian

government therefore has developed the latest Education Blueprint for the Ministry, drawing on many sources of input, from education experts at UNESCO, World Bank, OECD and six local universities to principals, teachers, parents and students from every state in Malaysia. This blueprint provides a comprehensive plan for a rapid and sustainable transformation of the Malaysian lower and higher education system through to 2025. It covers a range of initiatives introduced as National Key Result Areas and sets out fundamental changes that the nation requires. This means looking at student learning, recruitment, training of and rewards for educators, how the Ministry of Education itself operates as well as benchmarking against international standards (Malaysia Education Blueprint 2012). Graduates from Malaysia have no problems finding employment back in their home country (Independent Education Consultant 2014a, b, c).

In relation to standard setting for higher learning institutions, a step taken to increase university visibility and international ranking is the setting of a standard academic performance target for all university academics. This target includes international publications, H-index and citations in various disciplines and quality student supervision. Other criteria equally important to the performance target are research funding both by national and international bodies, increased participation in research exhibitions and competitions, improved consultation and administrative duties at the university and better teaching scores as evaluated by students.

As these criteria are set, academics have begun fulfilling them, adding depth and breadth to the quality of their university. Obviously, these then lead to increased visibility of Malaysian academics in the international arena, not forgetting an increase in university ranking.

Additionally, there has been a rise in staff and student exchanges with other universities in the Asian region as well as beyond. Inbound and outbound programmes are facilitated by a special unit set up at the universities. This has also managed to increase international student intake over the years.

The University of Malaya is also currently creating and promoting double-degree programmes in collaboration with local and foreign universities. This effort seeks to provide more marketable graduates for the global workforce besides improving university academic programmes in general. A case in mind is the dual-degree programme—Bachelor of Islamic Religious Knowledge and Science. The marrying of the two bodies of knowledge is aimed at producing quality thinkers who balance the two areas as was done by historic knowledge experts of the past such as Ibn Khaldun and Ibn Sina (Avicenna). This programme was created about 2 years ago and has yet to produce its first graduates, but looking at how these students are able to grasp areas of knowledge beyond those who enrol in a Bachelor of Islamic Religious Knowledge or Bachelor of Science programme, the university sees the potential graduates as marketable and unique for the future workforce.

Explosive Growth in Higher Education in Asia Over the Past Two Decades

Higher education enrolment has seen explosive growth across Asia over the last two decades, attributed to high birth rates, enhanced school participation rates and the perceived importance of advanced education in ensuring life opportunities. To cope with increasing enrolment, higher education systems have had to 'expand out' by building new universities, hiring new staff and encouraging private higher education providers. The rising demand for instructional staff to serve the fast emerging public and private universities has forced many countries in Asia to 'expand up' by introducing graduate programmes to prepare future instructors (UNESCO Institute for Statistics 2014). Governments expected that expanding graduate education in universities as centres of research (at graduate level) will yield positive economic returns; they saw this as one way to heighten national economic competitiveness.

Enrolment growth entails the need for qualified staff and upgrading of existing instructors. Most middle-income countries across Asia have been providing graduate education to cope with this demand. The need for more and better-qualified academic staff was the main motivator for expanding graduate education in the region. Analysis of the factors behind increased undergraduate enrolment over the last 20 years shows that enrolment growth has put financial pressure on many governments. Governments have responded by lowering public university instructional costs and shifting higher education costs to students and their families. Public universities initiated new tuition-based programmes and enterprises to offset operating costs; some lowered delivery costs by adopting online instruction and distance education. Many governments also instituted legislative reform to embrace private higher education growth in Asia. Increased access, however, has not generated greater equity. While many Asian countries have achieved gender equity in higher education, the poor still face disproportionately limited access to higher education (UNESCO Institute for Statistics 2014).

National support for graduate education was also influenced by government interest in promoting university-based research for economic development. Graduate education has expanded in Malaysia and Thailand; the two middle-income countries showing the most dramatic growth at this education level over the last decade. Support for graduate education in Malaysia and Thailand is linked to the belief that a highly educated workforce will attract international investment that will eventually pay off in national economic development. To yield the payoffs, top universities have to be recognized as good by the international community. Hence, a high international university ranking is viewed as representing respect, justifying government investment in institutions, and used for attracting students and faculties (UNESCO Institute for Statistics 2014).

Since publication rates play a key role in all international ranking systems, pushing faculties to increase their publication in top-tier international journals is viewed as a strategy for gaining the desired international attention; university staff are under pressure to undertake more publication-related research. Commercialization

of university-based research is also regarded as a meaningful income source for universities to reduce public funding. Most research is not done at universities but by private sector enterprises, because the private sector wants proprietary rights over commercially viable findings and is reluctant to outsource research. Many factors such as unfavourable tax laws and limited access to capital may limit returns on university-based research. University and government research have very low direct returns and contribute only indirectly to economic growth; such research may benefit national development but may not result in the economic payoffs that governments expect (UNESCO Institute for Statistics 2014).

While university rankings are controversial, they are reshaping strategic planning, national higher education reforms and faculty work conditions. However, rankings at the institutional level may mask variations in programme quality within universities. Pockets of excellence can be found in many universities, not just in those topping the world rankings. Hence, governments may benefit by targeting their research support to universities that may not yet top overall rankings but which excel in niche areas (UNESCO Institute for Statistics 2014). Since international collaboration in research is a strategy for helping universities improve their research quality and output, university incentive systems may need to factor the value of collaboration into their reward structures.

The Malaysian government has targeted international enrolment of 10% of total higher education enrolment by 2020 (Ministry of Higher Education 2007). At graduate level, universities can set their own tuition structures, allowing greater flexibility to use tuition fees to meet costs. Hence, shifting from undergraduate to graduate enrolment offers an economic advantage to universities. Malaysian research universities are cutting down on undergraduate enrolment while increasing graduate enrolment, aiming at eventually achieving an undergraduate-to-graduate enrolment ratio of 1:1. Malaysian research universities enrol a disproportionate share of international students at the graduate level. International students select Malaysia for five main reasons: (a) Cultural comfort: Malaysia provides a friendly environment for Muslim students. (b) Cost: relative to the higher education costs in traditional destinations such as the United States, United Kingdom and Australia, degree programme costs in Malaysia are low; (c) value for money: the quality of Malaysian higher education is seen as good, and perceived as representing value for money; (d) language of instruction: most instruction is offered in English, which is seen as offering better access to international job opportunities; and (e) quality of life: Malaysia offers a good quality of life; it is regarded as a comfortable place to live and study (Chapman and Chien 2014).

Conclusion

Malaysian public higher learning institutions have managed to increase the pool of international talents and international funding which have further spurred even more involvement and support by the Malaysian government and industries alike.

As such, Malaysians, in general, have enjoyed beneficial and desired aspects in higher education.

The universities in Malaysia are not resting until their mission to be among the top 50–100 in the world is reached. The support by the faculties, administrators, alumni and boards of directors as well as increased capabilities of each higher learning institution will continue creating better higher education capacities for Malaysia in the Asian region. The mission will fulfil the aspiration of higher education in Malaysia which is to produce a highly skilled workforce marketable in the global workplace.

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Chapter 7
Institutional Differentiation in the Era of Massification: The Case of Malaysia

Chang Da Wan

Trow (1973) famously introduced the three stages of growth of higher education systems—elite, mass and universal. Based on the percentage of student population among the age cohort, more commonly known as gross enrolment ratio, these stages are defined quantitatively. An elite system has been categorized as having between 1 and 15% of students within the age cohort of 17 and 22 years, a mass system ranging between 15 and 30%, and a universal system has more than 50% of a cohort in higher education (Trow 1973). While the three stages proposed by Trow may seem continuous using the cases of the United States and the United Kingdom, the development across these stages may not follow a homogenous path as in the case of other systems such as in Japan (Huang 2012).

Apart from the quantitative indicators of the stages of growth, there are also qualitative changes to the structure of higher education systems and their purposes. For instance, the purpose of higher education in an elite system is to educate a handful of students to become leaders and to govern in society. In a shift towards a mass system, as well as within a mass system, the purpose of higher education has a greater technical, professional and vocational focus. Conversely, a universal higher education system is expected to become more accessible to the wider population and largely takes the form of general and lifelong education. Hence, Trow (2000) argues that in line with the stages of growth in higher education, the policies, structures and practices also need to change in line with the needs and developments in these different stages.

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Based on Trow's classification, the Malaysian higher education system currently is at the tail-end of the massification phase and on the verge of moving towards universal access. In 2012, the gross enrolment rate for higher education in Malaysia was 48% involving 1.2 million students (MOE 2015). The number of students in higher education in Malaysia in the last two decades has increased by 70%, and is showing no sign of slowing down as demand for higher education remains high. The increase in the number of students has been accompanied by a staggering expansion of higher education institutions, beginning with the establishment of Universiti Malaya in 1962 from an autonomous campus, to having five public universities by 1975, and further with the introduction of the Private Higher Education Institutions Act in 1996 (Act 555) that recognized private higher education institutions.

This chapter examines the need for differentiation in the era of massification in the context of Malaysian higher education, in response to the proposed Hypothesis Two of this book. More specifically, this chapter argues for the need to construct a diversified system for the future development of higher education in a rapidly developing country. In the first section, the chapter explores the concept of differentiation in the field of higher education, which is followed by exploring the ways in which Malaysian institutions are differentiated and the extent to which the Malaysian higher education system is diversified. With the understanding of differentiation and diversity, the chapter concludes by discussing possible ways in which Malaysian universities can further differentiate themselves, in view of the competition and need to survive in the era of massification and a universal higher education system.

The Forms of Differentiation

Differentiation, as defined by Eisenstadt (1964), is a classificatory concept that

> …describes the ways through which the main social functions or the major institutional spheres of society become dis-associated from one another, attached to specialized collectivises and roles, and organized in relatively specific and autonomous symbolic and organizational frameworks within the confines of the same institutionalized system. (p. 376)

In more simplistic terms, differentiation is a continuous form of social change. For argument sake, I postulate that differentiation has always been an essential part of higher education. Historically, universities have differentiated themselves to create a unique entity for their own institutions. For instance, we may understand Oxford University and Cambridge University to be very similar to the point that they are commonly known as Oxbridge. In addition to the fact that Cambridge University was established by some scholars who left Oxford University, similarly, they are both collegiate universities with some of the self-governing colleges having the same names like St. John's, St. Edmund's and Corpus Christi, use the pedagogical system of 'tutorials' at the undergraduate level and share very much the same heritage and culture. However, these two universities also have their own unique identity which in part is due to their differentiation. For example, while Oxford maintains the tradition

of wearing academic gowns for examinations, Cambridge has discarded this tradition. In terms of research, it has also been claimed that Cambridge is much stronger in the natural sciences and Oxford is more inclined towards social sciences and humanities. These nuanced differences, as a result of differentiation, have shaped unique identities for Oxford and Cambridge.

Although the higher education in the United Kingdom became a unified system when the binary division of universities and polytechnics was abolished in 1992 (see Croxford and Raffe 2015; Leuze 2011; Raffe and Croxford 2015), there remains a more subtle differentiation in the form of hierarchy. The former polytechnics, albeit now renamed universities, continue to be known as post-1992 institutions. Oxbridge and 22 other research-intensive universities came together to establish an association known as the Russell Group, and universities in this group have remained very much at the top of the hierarchy in terms of their influence in policy debates and other matters in higher education, despite the fact that it is meant to be a unified system (Raffe and Croxford 2015). This hierarchy in the UK system is known as vertical differentiation.

Another classic example of differentiation in higher education is the California Tripartite System, which is a form of horizontal differentiation based on the purpose of the institution (see also Teichler 2007). Following the California Master Plan which was developed in 1960 as a guarantee that there would be a place in tertiary education for every high school graduate (Kerr 2001), the operationalization of the master plan therefore was to allocate the top one-eighth of high school graduates into the University of California system, the next one-third into the California State University system, and community colleges would cater for the remaining students. The California tripartite system consisting of public research universities, comprehensive four-year undergraduate universities and open-access community colleges is a form of differentiation of purpose and intent among the higher education institutions within the Californian system.

Apart from institutional differentiation—both vertical and horizontal—the elitist nature of higher education is in itself a form of signalling in regard to differentiating the students. As Trow (1973) outlined, university education in the elitist manner represents the privilege reserved for people of high status or those with extraordinary academic abilities. However, as higher education became more accessible, the signalling ability of university education and its credentials have become weakened. From a high-status opportunity, higher education in a mass system gradually became more easily available to people from other social classes, and hence, higher education partly lost its social status and signalling ability. Likewise, the extraordinary ability of students has also been watered down as more students enter university. The growth in the number of places in universities, when not comparable to the economic opportunities and demands for university graduates, has led to the situation of graduate unemployment. Conceptually, graduate unemployment indicates the weakening of higher education as a form of credential signalling for increasing the amount of university graduates. Hence, there is a trend of expanding out and expanding up at the same time, where the increase of students with an undergraduate degree has

created more demand for postgraduate degrees as a means of credential signalling (see Chapman and Chien 2014; Dore 1997).

Collectively, the roles of institutional differentiation and individual differentiation have allowed us to explain why university graduates enjoy a higher return in terms of wages as compared to non-university graduates (see Chevalier and Conlon 2003; Hussain et al. 2009; Trust 2010; Boliver 2013). Regardless of the methodological approach, the findings have remained similar. Interestingly, to explain wage differentials among university graduates, at least in the case of the UK, the types of universities have been found to be a significant indicator (Chevalier and Conlon 2003), and this further reaffirms the argument that higher education in the UK, despite being a unified system, is hierarchical (Croxford and Raffe 2015).

The cause and effect of differentiation should also be considered in understanding the role of institutional differentiation. Most sociological research on institutional differentiation has focused on how this social change will result in unequal social reproduction. For instance, students in less prestigious universities will not be able to compete with their peers from institutions higher up in the hierarchy. However, Croxford and Raffe (2015) illustrated that social reproduction also has a role in shaping the ways in which universities are differentiated. For example, by understanding the niche market of students, an institution may differentiate itself in order to reach out to a particular group of students. Hence, differentiation has been identified as a two-way change that was shaped by as well as which shaped the development of universities.

The Pros and Cons of Differentiation

Although differentiation to some extent can be considered as a natural process of change for universities in the era of massification that will lead to diversity, importantly, differentiation also poses a fundamental problem to the higher education system. When differentiation intensifies and universities become more specialized and unique, the system itself becomes more diverse. Hence, this can contribute to an inherent problem of the differentiated institution integrating into a larger framework. As Eisenstadt (1964) explained:

> … the more differentiated and specialized institutional spheres become more interdependent and potentially complementary in their functioning within the same overall institutionalized system. But this very complementarity creates more difficult and complex problems of integration. (p. 377)

In other words, the difficulties of integration can be seen as a result of institutional differentiation, whereby an institution becomes much more autonomous with its unique identity, and therefore creates a more complex problem of integrating into a one-size-fits-all framework with the specialities and unique identity developed (Eisenstadt 1964). However, the problem of integrating into a common framework due to varieties is one of the four possible responses to differentiation outlined by

Eisenstadt (1964). The other extreme response that can take place is that differentiation will result in a situation of anarchy, which means that there will be no control in the system. In between these extreme responses, there are also possibilities that differentiation will lead to a constant and continuous differentiation process as well as a regression towards the 'benchmark' institution becoming a less differentiated system.

As Meek et al. (2000) pointed out, one of the factors that encourage and foster institutions to differentiate themselves is market forces. Particularly in the case of enlarging the potential market of students, diversity through differentiation provides more choices for students and widens participation in higher education (Birnbaum 1983; Huisman et al. 2007). Through horizontal differentiation by institutions, there are tangible benefits for the higher education system to reach out to a more diverse group of students, as well as different levels of participation.

While market forces are the fostering factor, governments and policymakers tend to be more concerned with maintaining or even increasing diversity, whereby regulation is one of the impeding factors hindering institutional differentiation (Meek et al. 2000). The differentiation therefore presents a challenge for institutions to conform to policies and regulations, and more so in a rigid and one-size-fits-all system.

The next section of the paper shifts the focus to examine the case of Malaysia by exploring the ways and extent to which differentiation has shaped the diversity of its system.

Differentiation and Diversity in the Malaysian Higher Education System

The Malaysian higher education system can be divided into two major sectors—public and private. Currently, 58% of students are in public higher education institutions and the remaining 42% are in private institutions (MOE 2015). As for the academic staff, 64% of them are employed in public institutions and the remaining 36% are in private institutions. In terms of the institutions, the public higher education sector comprises 20 universities, 30 polytechnics and 80 community colleges, while the private sector includes 70 universities (including branch campuses of foreign universities), 34 college universities and 410 colleges. From these figures, is the Malaysian higher education system diversified?

As discussed earlier, there are several different forms of differentiation—vertical and horizontal—that can shape the higher education system into becoming more diverse. Huisman et al. (2007) further outlined an analytical framework comprising five variables that can be used to assess the diversity of a higher education system, which include institutional size, form of institutional control, range of disciplines offered, degrees awarded and modes of study. While the previous study used an analytical framework to compare the diversity of higher education across countries in a quantitative manner, I use the framework to conduct qualitative analysis of the Malaysian system by predominantly focusing on universities.

Institutional Size

According to statistics reported for the year 2013 (MOE 2014), across the 20 public universities, the average size of institutions in terms of student number ranged from 2783 to 33,361. Across these universities, the more established universities that were established in the 1960s–1980s typically have more than 20,000 students. Conversely, the newer public universities tend to have smaller populations around the figure of 10,000 students. Comparably, the number of academic staff in public universities is also in line with its student population, where in older universities their number ranges between 1000 and 2500, while newer universities have hundreds of academic staff.

The only exception among public universities is Universiti Teknologi MARA (UiTM) which has an enrolment of 189,551. However, unlike other public universities that largely offer programmes at the Bachelor's, Master's and Doctoral level, almost half of UiTM students are enrolled in programmes at the certificate, foundation and diploma levels. Uniquely, this university only accepts indigenous and international students. In terms of academic staff, UiTM employed 9472 in 2013. It is also important to point out that the case of UiTM reaffirms the argument of Croxford and Raffe (2015) that due to social reproduction, institutions differentiate themselves, and UiTM has evolved to become a university that strictly caters for the needs of indigenous students in Malaysia.

While public universities have detailed breakdowns in terms of numbers of students and academic staff, the number of students in private institutions is reported by category. Across the private universities, there are 232,198 students enrolled, with another 16,259 students enrolled in branch campuses of foreign universities. In these private institutions, there are 10,067 and 965 academic staff in private universities and branch campuses of foreign universities respectively.

Form of Institutional Control

Legislatively, all public higher education institutions in Malaysia are governed by the Universities and University Colleges Act (UUCA) that was gazetted in 1971 and many of its subsequent revisions. The only exception is the International Islamic University of Malaysia, which is considered a public university but was established under the Companies Act 1962. The UUCA has been instrumental in putting all public higher education institutions under the tight control of the State until relatively recently where by the end of 2014, 12 public universities had been granted autonomous status.

Conversely, the Private Higher Education Institutions Act (Act 555) that was gazetted in 1996 is the main legislation that governs these private institutions. Yet, private higher education institutions have to be established as a company under the Companies Act 1962, as stipulated in Act 555 and be governed by the Registrar

General in the Department of Higher Education. Although the State's control over private institutions may not be as strong as public institutions, private institutions have to seek permission from the Department of Higher Education on matters ranging from appointment of institutional leaders to programmes and fees structure.

Interestingly, although public universities tend to be more homogenous in terms of their governing structure, there is much more diversity among the private institutions. As Tierney (2010) illustrated, there are at least six different types of private universities in Malaysia. These private universities can take the form of a university that is non-profit, virtual, for-profit, a franchise, corporate and public-supported, and within each of these categories, they are different in terms of ownership and governance, organizational purpose and funding (also see Wan et al. 2015a).

Besides the legislative aspect, all programmes offered by higher education institutions in Malaysia have to seek accreditation from the Malaysian Qualifications Agency. This requirement is seen as a form of quality assurance and accreditation as guided by the Malaysian Qualifications Framework.

Range of Disciplines Offered

In terms of disciplines offered, there is a clear difference between public and private universities (see Wan et al. 2015a). On the one hand, every public university offers courses in hard sciences and a wide range of applied sciences. These public institutions also cover the entire range of social sciences and humanities, with the only drawback of having very few programmes in law. Engineering and business-related programmes are also available in all public universities, but there are relatively fewer courses in health-related programmes. In terms of programmes classified as services, public universities tend to focus on sports, environment-related and security programmes. Overall, across the 20 public universities, the range of disciplines offered is wide and there is a significant overlap between these public institutions.

On the other hand, private universities, with the exception of foreign branch campuses, have very few programmes in hard sciences. In terms of applied sciences, the courses and programmes are mostly in the area of biotechnology. There are no courses in disciplines such as agriculture, fishery, forestry and veterinary science. As for social sciences and humanities, the programmes offered by private universities are predominantly in psychology, sociology, international relations, communications and law. There is no programme in history. Like public universities, private universities have an extensive coverage of programmes in engineering and business. In addition, there are also many programmes offered in medicine, nursing, dentistry and pharmacy. As for services, private universities tend to only offer courses in the field of tourism. Besides the traditional disciplines, there are also a number of private universities that offer liberal arts and/or American degree programmes.

Degrees Awarded

There is much less diversity in terms of the degrees awarded by higher education institutions. Public universities have a strong focus on qualifications from Bachelor's degree to the highest doctoral level. Polytechnics tend to offer programmes at the diploma and advanced diploma level with selected polytechnics also offering programmes at the Bachelor's degree level. Community colleges focus on the certificate and diploma levels.

Similar to the public universities, private universities also award degrees at the levels of Bachelor's, Master's and doctoral, with some universities also offering diploma and foundation degrees. University colleges largely offer degrees from the levels of certificate and foundation to Bachelor's, while colleges focus on the certificate and diploma levels but in some instances, private colleges will collaborate with foreign universities to offer degree programmes through twinning programmes. It is also important to point out that most private higher education institutions have some form of twinning and joint programmes with universities in Malaysia and/or foreign institutions.

Modes of Study

A large majority of students in public universities are pursuing their courses as full-time students. Only 12% of students in public universities study part-time and less than 2% study under a flexible mode. Across the 20 universities, only two universities do not offer part-time programmes, and only one of the 20 universities has programmes offering a flexible mode.

There is a lack of information in terms of the modes of study available for students in private universities. However, besides the conventional universities, there are two open universities, and one of them has achieved the status of a 'mega university' where its enrolment of students surpassed 100,000 in 2012.

Institutional Diversity

The previous section has provided a description of the diversity in the Malaysian higher education system using the analytical framework of Huisman et al. (2007). While descriptively there are some forms of diversity in the system, especially between the public and private sectors, I would argue that there remains a lack of institutional diversity among universities.

First, among the 20 public universities, the identity of these universities is heavily determined by the UUCA as well as the State through the Department of Higher Education and Ministry of Higher Education. For instance, five of the oldest universities

have been classified as research universities, while another four are seen as comprehensive universities and 11 are focused universities in specific areas of education, management, technical and engineering and defence. Within the four comprehensive universities, two of them are also Islamic universities. However, apart from these classifications according to function, there has been relatively little effort among these institutions to further differentiate themselves to shape a unique identity. Arguably, the most drastic effort so far has been by Universiti Sains Malaysia through the APEX University Programme and aims to transform itself into a world-class institution in the field of sustainability, but the transformation process has encountered more challenges than progress (see Dzulkifli and Ramli 2008; Sarjit and Morshidi 2010; Wan et al. 2015b). Likewise, the youngest public university has attempted to brand itself as a university that focuses on entrepreneurship, but it is more renowned as another new, public and regional university, rather than evolving and transforming itself to become the Malaysian version of Babson College which is famous for entrepreneurship.

One of the limitations that has hindered the ability of public universities to differentiate and transform themselves is the limitation prescribed by the UUCA. It should also be recognized that differentiation among public universities in Malaysia can only take place within a limited space as provided by the legislation, rules, regulations and policies that govern these institutions. The constitution of public universities has been provided in the UUCA with relatively limited room for institutional differences. For instance, as provided by the UUCA, the power to appoint institutional leaders is in the hands of the Minister with advice from a search committee.[1] However, the selection of candidates has remained parochial, and hence, this has in a way limited the ability of these institutions to chart their way forward in a differentiated, specialized and unique way (see Morshidi et al. 2012). Even with the autonomy provided through the APEX University Programme and subsequently afforded to the other 11 public universities, autonomy has remained somewhat limited for institutions to differentiate themselves within a larger framework of the UUCA which prescribes that public universities shall remain federal statutory bodies. This also suggests that the autonomy given to these public universities remains within the framework and structure of the civil service, Treasury and other governmental agencies (see Fauziah and Ng 2015; Wan and Abdul Razak 2015). Likewise, private higher education institutions are also largely homogenous as their governance and structure are dictated by Act 555 with limited room for diversification.

Furthermore, the fact that higher education development in Malaysia since 2007 has been guided by the National Higher Education Strategic Plan 2007–2020 and subsequently the Malaysia Education Blueprint (Higher Education) 2015–2020, having these centralized policies in a way dictates the ways in which Malaysian universities, especially public universities, develop. Hence, apart from what has been prescribed, universities may be limited in terms of their abilities to differentiate and transform themselves beyond these grand and centralized policies.

[1] A search committee is tasked to nominate candidates for the leadership position and the appointment is made by the Minister.

More interestingly, the appointment of institutional leaders for Islamic universities which are public universities must adhere to secular arrangements instead of following the Islamic approach. Due to the fact that these institutions are classified as public and within the ambit of the UUCA, the power to appoint is in the hands of the Minister and the processes of selecting the candidates for appointment are similar across all public universities. This is true despite the fact that the secular arrangement may arguably be at odds with the Islamic way of appointing a leader, where the latter should be done through mutual consultation (*Shura*) and consensus (see Beekun 2012; Hamad, n.d.; Lari, n.d.). As a result, public universities in Malaysia are somehow limited in regard to differentiating themselves in order to develop their own unique identity.

Second, another major challenge that limits the abilities of Malaysian universities to differentiate themselves is the regulatory frameworks. For example, every programme, including content, approach and methods of teaching, has to be approved by the Malaysian Qualifications Agency. The accreditation process is tedious whereby learning outcomes, readings, approaches and other details about the modules in a programme have to be presented in detail. Furthermore, when revising or updating a programme that has been approved and accredited, approval from the Senate in the case of public universities has to be obtained, and in addition for non-autonomous public universities, revision of more than 30% requires approval by the Department of Higher Education. Likewise, private universities have to also seek the permission of the Department of Higher Education for the revision of curricula.

Without a doubt, the quality assurance and accreditation that have been put in place are important mechanisms to ensure quality in higher education. They also allow for comparability of programmes across universities. However, the regulatory framework at the same time can also limit a university from becoming innovative in terms of trying out new approaches to educate its students. For instance, the more flexible and learner-centric approach of liberal arts education may have to adapt itself to fit into the system, and gradually, will differentiate into another conventional programme in a university. It is also unthinkable and impossible for any Malaysian higher education institution to seek innovative and unconventional methods of education, for example, to model itself on the Deep Springs College. This college is a unique two-year college that combines three principles of academia, labour and self-government, where students, besides their academic pursuit using a liberal arts approach, have to work and live to sustain their campus community that is a ranch and farm in a desert area. The limitation to emulate such form of education can be attributed to the regulatory framework in the Malaysian higher education system.

Closer to the Malaysian system, there has been an initiative to set up a w*aqf*-university that provides free education to underprivileged students. *Waqf* is the Islamic concept of inalienable endowment through donation for religious or charitable purposes with no intention of reclaiming the assets. A *waqf*-university is not a new concept; the world's oldest functioning university recognized by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), University of al-Qarawiyyin is built on the foundation of a *waqf* established by a lady named Fatima al-Fihri in 859 B.C.E. (Dzulkifli 2016; UNESCO, n.d.). Similarly, the renowned

Islamic university, Al-Azhar University in Egypt, was also established based on the *waqf* concept and through this form of irrevocable endowment has enabled the survival of these medieval universities. However, within the current regulatory framework of the Malaysian higher education system, a *waqf*-university can only be set up as a private university and has to be registered as a company under the Companies Act. This relates to a fundamental problem whereby private universities that are essentially companies, have to first and foremost ensure their sustainability by making a profit. Yet, a *waqf*-university is rooted in the concept of charitable endowment and is at odds with the commercialization and commoditization of a university. Hence, this limitation can once again be attributed to the overall regulatory framework hindering differentiation of and innovative developments by universities in Malaysia.

Not only it is not possible to establish a fully *waqf*–university, the requirement for private institutions to be established under the Companies Act 1962 has to a large extent shaped the private higher education sector into becoming profit-driven. Compounded by the segregation and clear regulatory frameworks of public and private institutions, whereby private institutions do not enjoy any form of subsidy or incentive, the survival of private institutions has entirely relied on revenue from students. One of the implications therefore is that private institutions will strategize and transform themselves to meet the demands of the market, for instance, by offering a wide range of programmes in business, as well as other programmes in areas that are perceived to have higher market demand such as medicine, engineering, law, tourism and communication.

Third, university ranking is another major constraint for universities to differentiate themselves. While these rankings have been accepted as a form of comparative data to create global standards of what can be defined as 'world-class universities', such comparison has also inevitably forced universities to conform to a homogeneous model (Hazelkorn 2017; Marginson 2010). More detrimentally, the non-conformation of universities into the model prescribed by these rankings will penalize the institutions and therefore discourage universities from diverging and differentiating themselves. In other words, due to the pressure for universities to be ranked more favourably in these rankings, universities have to strategize in light of the indicators used in the tabulation of these rankings. However, this ignores the fact that due to the comparative nature of rankings, the identification of indicators is already a form of benchmarking to illustrate the 'ideal' university. By joining the 'rat race' of university rankings, every university is competing to become another Harvard or Caltech, and sadly, has to forgo its unique identity and idea of a university.

In the case of Malaysia, university rankings have been used as the yardstick of success for universities and this has been explicitly spelt out in the various policies and national strategic documents. For instance, the Malaysia Education Blueprint (Higher Education) 2015–2025 clearly outlined the targets of having one Malaysian university ranked in the top 25 in Asia, two universities in the top 100 globally and four universities in the top 200 in the QS World University Rankings by 2025 (MOE 2015). The detailed specification of positions in a particular university ranking can be interpreted as a prescription that the best Malaysian universities must have the form and intent as dictated by this commercial company called Quacquarelli Symonds

(QS). In other words, Malaysian universities are discouraged from differentiating themselves in any other ways and models, except the one outlined by QS through the indicators of university rankings. Importantly, this ignores the fact that most indicators used in the tabulation of university rankings place much greater emphasis on research and publication, which are measurable and at times arbitrary indicators, but may not reflect an objective measure of the performance of a university in terms of quality (see Altbach et al. 2009; Azman et al. 2014; Hazelkorn 2008; Marginson 2010; Morshidi et al. 2017; Venkatraman 2010; Wan 2015). More importantly, the aspiration of having Malaysian universities ranked in these university rankings can be a form of hindrance and discouragement for universities to differentiate themselves to create a unique identity, instead of conforming to the rat race.

The pressure of university rankings is not only on those institutions that are aspiring or have been identified as doing so. Due to the incentive given in the context of Malaysia, such as acknowledging five universities as research universities and accompanied by significant funding, the status of research universities has also become the goal for all other universities to strive for. This has also cascaded down the pressure for other universities to differentiate themselves into becoming research universities. The comprehensive and focused public universities have been pushing their academics to conduct research, and at times, this has been done at the expanse of teaching and learning—all for the sake of striving to become research universities and to be highly ranked (Azman et al. 2014, 2016; Wan et al. 2015c). Thus, the pressure on universities to conform to the rat race of university rankings happens across the higher education system, and inevitably, hinders and discourages innovative differentiation of universities.

The Way Forward

There are various forms of differentiation in the Malaysian higher education system. There are hierarchical differentiations in terms of the levels of qualifications that can be awarded as well as the status of these higher education institutions. In addition, the categorization of public universities illustrates vertical differentiation in the system. These forms of differentiation are predominantly State-driven and accompanied by funding to compel institutions to change.

However, as Sinek (2009) argues, it is differentiation in regard to ‘Why and How’ instead of ‘What and How’, which truly makes an organization or institution great. The focus on differentiating in terms of ‘What and How’ is by offering products with more features, better service or better price, while the focus on ‘Why and How’ is to first begin by having a clear purpose of why change is needed. In relation to the Malaysian higher education system, the differentiations that have taken place have predominantly been about the ‘What and How’, such as more courses, better teachers and lower prices. With the exception of a handful of universities, such as

UiTM, Apex University Programme[2] and classification of research, comprehensive and focused universities by the Department of Higher Education, there is limited differentiation and change that begins with a clear 'Why'.

Thus, in the era of massification and to ensure the sustainability of universities in a highly competitive system, individual universities need to innovatively differentiate themselves with clarity and consistency in regard to 'Why and How'. Research universities must not rest on their laurels as merely another institution that places emphasis on research; each of these research universities must set a clear purpose of what kind of research institution they aspire to become in Malaysia. Likewise, comprehensive universities and the majority of private universities must not only offer programmes in a wide range of fields; each of these universities needs to rethink why they exist in terms of their purpose and mission to become a unique teaching institution. Importantly, for differentiation and diversity to happen, regulatory frameworks and rigid structures may need to be dismantled. The State through the Department and Ministry of Higher Education also need to change by asking itself the purpose of its existence and the role it can play to foster instead of limiting the development of higher education in Malaysia with the aim of achieving a universal system.

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[2]UiTM and Apex are the exception where they are allowed to differentiate. The classification by Department of HE—research, comprehensive and focused—is the only form of differentiation of public universities.

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Chapter 8
Challenges of Massification in Higher Education: The Case of Vietnam

Nguyen Thi My Ngoc and John N. Hawkins

Introduction

In response to globalization, over the past two decades, a great deal of attention has been paid to higher education reform in Southeast Asia. A number of countries have embarked on major reforms with the aim of developing a modern higher education system that can support the economic and social development and facilitate enhanced international trade and communication (Harman et al. 2010). Higher education is also increasingly seen as a commercial product to be bought and sold like any other commodity (Altbach 2006). At the same time, many requirements and challenges have emerged in higher education institutions. Educators recognize the need for new efforts to ensure that courses and academic degrees meet employer and student expectations, as well as securing wider regional and international recognition of the qualifications of graduates (Hanna 2009). In Southeast Asia, many changes have been made with respect to legislative regulation of higher education, and Vietnam is no exception. These changes have followed the trend of proceeding with national plans for expansion and massification in higher education, to ensure that the HE system retains high educational value and continues to be competitive in the region.

Partially as a result of increased efforts to expand HE opportunities and satisfy the rising stakeholder interest in HE, Vietnam has experienced a rapid increase in both domestic and international HE growth. In 2006, a higher education reform agenda was announced, which proposed significant HE reforms to be enacted by the year 2020 (Hayden and Lam 2006). This announcement laid out very ambitious goals,

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each fraught with their own shortcomings. In the past two decades, Vietnam's HE system has witnessed rapidly expanding enrollment along with the growth of large, multidisciplinary universities alongside the smaller, more specialized institutions. This was accomplished in a context of stubborn inequality in participation rates and rural–urban biases. The new reform was designed to address these and other inequities in order to respond to the increasing demand for higher education among Vietnam's general population. As Hayden and Lam note:

> In broad outline, the higher education reform agenda envisions a system that by 2020 is three to four times larger than at present, better managed and better integrated, more flexible in providing opportunities for course transfer, more equitable, more financially self-reliant, more research oriented, more focused on the commercialization of research and training opportunities, more attuned to international benchmarks of quality and more open to international engagement. (2006, 12)

There are at least four primary features of this complex reform agenda—which contains over 30 specific objectives—that are of interest in a discussion of HE massification in Vietnam. First, and most likely, was a proposal to engage in a significant and massive decentralization of the legal status of Vietnam's HEIs. In short, it was proposed that the central government and the Ministry of Education and Training (MOET) "give them [HEIs] the right to decide and be responsible for training, research, human resource management and budget planning" (Hayden and Lam 2006, 12). This proposal followed several years of recognition that decentralization is a key to achieving massification. Second, and related to the first reform, was a proposal to disengage not only MOET but also other ministries (some 13 or so) that exercised almost total control over HE policy, and lodge such control in a form of state ownership that is more closely associated with the HEIs themselves. Third, there was recognition of the need for a more rigorous and transparent system of quality control and accreditation. It was noted that this was an area that had been lacking during the previous decade and was essential to constructing a new HE system that would demonstrate the State's commitment to HE reform. And fourth, it was proposed that a specific Higher Education Law be codified to serve as an overall guide to the massification envisioned ahead.

The higher education law was finally enacted in 2012 and took effect in 2013. It provided guidance in ten key areas that were not otherwise covered by previous more specific legislation: (1) The role and missions of the national and regional universities; (2) the legitimization of private universities (mentioned for the first time in an official policy document); (3) the granting of institutional autonomy along with accreditation options; (4) the development of a classification system for HEIs, outlining differentiation as to goals and missions; (5) a framework for HE research responsibility; (6) the role of universities in science and technology; (7) a detailed framework for quality assurance; (8) a new framework for ranking HEIs; (9) regulations governing the closure of HEIs; and (10) a regulatory framework for international cooperation of HEIs (Pham 2012).

There were numerous other objectives cited, including authorizing the growth of non-public or private sector HEIs to serve as demand-absorbing institutions (Hayden and Lam 2006).

As it turned out, this policy statement set high and difficult-to-achieve goals. There were several problems associated with HE reform in Vietnam over the next 10 years, not the least of which was how to fund such a major realignment of educational governance and management. A plan which carved out a clear sense of priorities was also never implemented. And the lack of experience in local governance proved difficult to overcome.

A recent report in the Los Angeles Times ("Vietnam Rising Star" October 8, 2015, C1) documents how Vietnam is increasingly attracting international investment funds in a variety of high-tech industries. For example, an Intel plant established 10 years ago continues to grow and develop and is implementing more complex product lines as well as training more technology experts. Vietnam is also one of the 12 nations belonging to the Trans-Pacific Partnership (TPP) and as such will benefit from tariff-free policies associated with that accord. All of this represents Vietnam's long-term strategy of moving up the value chain and away from being a hub for low-cost manufacturing. This strategy has prompted investment banks such as Goldman Sachs to predict that Vietnam, which is now ranked 55th among world economies, will move to number 17 by 2025. Its economy is closely linked to that of Japan, Taiwan, and South Korea; further, Vietnam has signed a separate trade agreement with Europe that, along with its participation in TPP, positions the country to attract even more international investment.

All of this good news is offset to some degree by the lack of skilled workers. Here, we find the higher education connection to what otherwise appears to be a strong prognosis for continued growth and development. A relatively small proportion of the population is college graduates, and although the numbers of both students and institutions are rising, the curriculum is not necessarily aligned with what the economy needs and wants. This represents part of the "push" factor for further expansion and reform of higher education, and as we shall see, these reforms are beginning to go into effect. As noted in Chap. 1, there are competing views on the value of massification. In Vietnam's case, elements of the two hypotheses stated in Chap. 1 are both present at this early stage of expansion. We can see that expanding the HE structure is creating more access and to some degree more equity for Vietnam's college-age cohort. On the other hand, Vietnam's previous tradition leaves the legacy of a small, elite structure such that even in an era of expansion, it continues to discriminate between a small number of Vietnam's college cohort and the more inclusive and available HEIs that are currently being developed in response to economic and technical needs.

Vietnam's more open economy is involved in this, as evidenced by the relationships with global firms such as Intel, which developed an exchange program to further align and improve university-level engineering programs. The implications of this political-economic background for these two hypotheses, and for Vietnam's massification future will be explored below.

Student Population: Facts and Comments

Vietnam has an increasingly large and comprehensive higher education system, comprising a large public sector and a small but rapidly growing number of private higher education institutions (Hanna 2009). As in other developing countries, there is a rapid increase in the elderly population and a large proportion of the workforce is shifting from the agricultural sector to the industrial sector. Furthermore, data from the Ministry of Education and Training indicate that higher education enrollment has expanded greatly over the past two decades in Vietnam from 893,754 students in 1999 to 2,177,299[1] in 2013 (not including more than 40,000 students who study abroad). This represents 8.4% of people in the 18-year-old age group. Interestingly, together with Malaysia and the Philippines, Vietnam is predicted to be in the world's top 20 nations, in terms of having large numbers of new enrollments, by 2025 (Calderon 2012). Data from the Educational Innovative Strategy division of the Ministry of Education for the period 2006–2020 indicate that student enrollment is forecast to continue to rise by 3 or 4 times during this period. At the same time, a large number of new universities have recently been established. Specifically, in 1999, Vietnam had 52 public universities, which rose to 187 public institutions (a 3.5-fold increase) by 2013, 5 private universities in 1999 and 29 universities in 2013 (a sixfold increase). The number of private professional schools also increased from 11 schools in 2001 to 98 schools in 2013 (a ninefold increase). Moreover, there are hundreds of joint programs licensed for operation in Vietnam, which add to the increased learning opportunities for Vietnamese learners.

Against this backdrop, questions have been raised about how to effectively allocate enrollment quotas for the expansion of these institutions. There are many arguments about how to control the number of student enrollments during the current population boom. In fact, there is one group which believes that the constant expansion of enrollment and degrees in higher education is simply creating the situation of "more professors, less skillful laborers." Another group believes that if Vietnam wants to follow the path of industrialization and modernization which other countries have experienced, current enrollments are still not sufficient and must continue to rise in the next decade to follow the mass higher education model, with the number of participants between 15 and 50% (according to Martin Trow's criteria). This raises many questions regarding various issues such as how to conceptualize the higher education system so as to effectively offer equivalent academic standards for the

[1] Educational statistics (2013), MOET.

diverse and different expectations of students and other stakeholders. And how can higher education deal with the contradictions between the growth in student numbers and institutional standards of quality, equivalence, and diversity in governance systems, and equity and equality issues in the restructuring of the higher education system?

Massification and Challenges in Higher Education

Such rapid expansion has presented several challenges for Vietnamese higher education. The first is that the increase in the number of HEIs has resulted in the institutional restructuring of Vietnamese higher education. This is considered to be one of the most complicated questions facing Vietnam's higher education system for the following basic reasons: (1) too many universities are located in the large cities; (2) the governing principle in university establishment is still a kind of "begging–giving" mechanism and a sense of being an exclusive right, leading to the problem that many universities are not strong enough to operate but are still licensed to work; (3) there exists a lack of control and supervision of the newly established universities as well as those that have been upgraded from former colleges and professional schools; and (4) most significantly, there is a lack of overall planning for the higher education system causing the "vague" or overlapping problem regarding the objectives and missions of the universities (Chinh and Dung 2014). In short, what is lacking is something akin to a "master plan" of higher education, similar to that which is so celebrated in California. Nowadays, it is found that too many universities declare their mission as leading research universities or declare that their objective is to produce highly qualified human resources but the actual conditions in which they operate and attempt to achieve their mission and objectives are too vague and mostly impossible to reach.

The next big problem, as noted above, is the lack of qualified faculty. In reality, the number of academic professionals has doubled, from 30,000 in 1999 to 60,000 in 2013. However, faculty levels are still insufficient to meet Vietnam's higher education needs. Related to the lack of faculty, faculty quality is also problematic. The practice of "bachelors teach bachelors" still exists in the newly established or upgraded universities. In addition, many important questions have arisen related to the quality of teaching, such as: How to train or develop junior staff in a short time? Who will conduct research under conditions where most faculties have an enormous and time-consuming teaching load? What should a university do to improve its research performance? How can students become familiar with research if teachers do not pay much attention to it? And how can higher education contribute to the knowledge development of society when the quality of teaching and research in universities is now being viewed with alarm? But regardless of these difficult conditions, it remains a fact that Vietnam still needs a dramatic expansion of faculty even if they cannot fully satisfy all the desirable standards of teaching and research. Given these conditions, the overall question of "which is the right way?" for Vietnamese higher education will remain relevant and more complicated for future educational leaders.

Another challenge and subject for debate between the government and the HEIs is the question of funding for HEIs. It is clear that central-level funding is easier if there are fewer HEIs. In fact, the main financial input for most public universities comes from tuition fees—about 70%; the government provides the remaining 30%. But what needs to be made clear here is that tuition fees are very low in comparison with other countries in the region and the government retains the right to approve whether tuition fees are raised or not. And although the statistical data show that the government budget invested in Vietnam's higher education increased dramatically in the period 2008–2012, (a fourfold increase over 2008), it still comprises only slightly more than 17% of the national budget, and this number does not correspond with the plans and needs for further development or massification of higher education.

Finally, the governance and administration of HE have not matched the latest rhetoric promoting development in higher education. It is possible to say that though there has been much effort toward change, Vietnam's higher education is still governed by a highly concentrated and centralized model and remains strongly subsidized by the State. In fact, ministry control and management of most of the main activities of HEIs including what to teach, who will teach, what kind of textbooks are used, and how many students can study in each year are guided by a series of detailed governmental regulations (Chinh and Dung 2014). This has a strong negative effect on both decentralized decision-making and increased autonomy, which are desperately needed in modern higher education. Since the universities are familiar and comfortable with depending on the State or Ministry of Education, it is quite hard for them to change or manage an institution, which needs to be more flexibly driven by the rapid changes and diversity in this era of high demand. In addition, establishing and developing educational regulations in terms of dividing the boundaries between the ministries is not clear and appropriate. Many administrative bodies including various ministries, people's committees, and local governments are allowed a major role in controlling and managing "their institutions". This creates an educational administrative system that is unwieldy, complex and often overlapping. In fact, with 14.4% of HEIs controlled directly by the Ministry of Education, 30.8% controlled by other ministries such as the Ministry of Transportation, Ministry of Foreign Trade, and so on, and 32.3% controlled by local committees and local government, only about 12% are self-governed (i.e., the private universities). Therefore, the administrative role of the Ministry of Education and Training (MOET) in some ways has diminished and become confused with respect to these other competing bodies (Statistic 2009). Also, though the MOET is the legislative body which has the responsibility for promulgating regulations in general, many educational managers believe that the monitoring and reviewing rules and implementation procedures of the institutions lack clarity, are undisciplined and are driven by bureaucratic formalism.

Observation Regarding Policy Dimensions

Another element of the trend toward massification as a means by which to meet the tremendous demand for higher education is that the government carried out an enrollment expansion policy beginning in 2005 (Resolution No. 14/2005/NQ-CP), asserting that Vietnam's higher education enrollment needs to increase quickly and at the same time ensure the highest educational quality. Moreover, the government has decided to conduct research and investigate implementing some key policies in the near future as follows.

First, they call for increased investment from the private sector as well as from foreign universities or partners, resulting in what is being called "partnership projects" and International Cooperative Education Programs (ICE). The government may allow these partners to deliver joint or twinning programs, as well as cooperating in research. With this policy-making progress, as of 2015, Vietnam had 89 private institutions, which accounted for 25% of national institutions and involved hundreds of foreign partners. However, a number of difficult questions have arisen. For example, will these privatized higher education efforts actually contribute to Vietnam's social goals of promoting social development and providing quality higher education, or are they primarily interested in profit? What are the differences between typical commercial business and these "intellectual" businesses? What are their limitations? Is the purpose primarily to maximize profit? How can the government monitor and evaluate their educational quality? A recent study sheds more light on this effort to accommodate Vietnam's drive toward massification (Do 2015). The number of such partnerships and ICE efforts has been steadily increasing. These collaborative programs, while increasing, have also revealed several systemic problems associated with the lack of progress in other HE reforms. Central to these problems is the continued micromanaging of international partnerships by the MOET and other central government agencies. The bulk of these degree programs are in economic and business-oriented fields of study. The irony of these efforts, which stress independence, entrepreneurship, and risk taking, is that the programs themselves remain under the tight control of the MOET (in such areas as enrollment, tuition, and curriculum). This, in turn, has resulted in a history of continual violations by these institutions of MOET regulations and a decline in the quality of the programs that continue to exist. When looked at closely, those ICE programs that dominate the expansion of HE in this area are generally of low quality and are partnered with international institutions that also are poorly ranked. Confusion in this sector is at all levels, between the MOET and the Vietnamese HEIs, as well as their international partners. It appears that the government and HEI partnerships will have to continue to develop and maintain appropriate regulations and seek understanding of these regulations for the foreseeable future.

Next, in the past 5 years, the concept of higher education and tuition fee cost-sharing has been considered extremely important by both the government and HEIs. Indeed, there have been many calls for the contribution of society, students and parents to support the increase of tuition fees and to ensure education quality. How-

ever, when the MOET presented this idea to the Vietnam Assembly, it received a strong negative reaction from its members toward the concept of increasing tuition fees, and this policy has been postponed. A recent decision by the Prime Minister's Office (Decision No 157/2007/QĐ-TTg and 319/2008/QĐ-TTg) proposed to provide low-interest rate loans for approximately one-third of low-income students for their study at university. However, because the mechanism for the "157 loan programs" is such that the loan agreement is made with students' families rather than the students themselves, it consequently reduces the ability of students' families to borrow. Regardless of these difficulties, this policy demonstrates a new and important effort of the government to help expand Vietnamese student participation in higher education learning. At present, the government has a plan to request that the best and most prestigious Vietnamese universities actively develop a project on self-financing and self-responsibility with respect to tuition fees, with the understanding that the product they "sell" is of good quality and is accepted by society as a whole.

Lastly, it is clear that quality assurance and accreditation in higher education have been a strong focus of the government. There are two types of accreditation, which will be applied in the future: one is institutional accreditation and the other is programmed accreditation. In the period from 2016–2020, institutional accreditation will be implemented. This will constitute one of the more useful channels for universities to improve their quality, and their accountability in general.

However, after more than a decade of implementing Vietnam's Higher Education Reform Agenda (HERA), the challenges brought by the massification trend continue to reveal difficulties and weaknesses in the HE system in general. The "Basic and Comprehensive Innovation in Education and Training Act," launched in 2013, reported that "the quality of education and training did not meet the requirements of economic and social development, and could not resolve the relationship between increasing the number of students on the one hand, and improving the quality of education on the other. Educational programs remain overloaded with students. Higher education and vocational education have not met the needs of society, are not articulated with human resource requirements, and are not focused on professional practice skills. Teaching and learning methods remain underdeveloped and do not really promote the initiative and creativity of learners. Evaluation methods and results of assessments are outdated, and there remain inadequate teaching facilities." Indeed, it is the pressure of increasing enrollment and expansion of higher education capacity, in short, "massification," that causes a lot of difficulties and challenges for Vietnam's higher education system. It is likely that without more reform, in the midst of a continued lack of qualified faculty, and without better facilities for teaching and learning the situation will continue to worsen.

Conclusion

In the process of economic development—including greater higher education demand combined with the rapid increase of the population—massification in higher education has been identified as an inescapable trend in almost every nation. As a result, every country needs to maintain essential control over its academic institutions, and at the same time allow individual universities to have an adequate degree of autonomy and academic freedom if they are to flourish. This trend of massification has affected the Vietnamese higher education system significantly. The expansion of enrollment has captured the attention of educational policy makers, but as of 2015, the response had not been adequate to satisfy the demand. It is said that the main challenge in a mass higher education system boils down to the issue of diversity and differentiation. Clearly, the increasing student numbers cannot be accommodated by simply expanding the existing higher education system without considering the other important factors, such as governance and management, teaching and learning, research, financial affordability, quality assurance, and so on.

To deal with the contradiction of the diversity in Vietnamese society during the massification era, the Vietnamese government has implemented a variety of important programs and policies. They are, in sequence: (1) privatization, and expansion of the higher education system by appealing to the contribution of many other parts of society, including foreign partners; (2) implementation of institutional and program accreditation to assure the quality of teaching and learning; (3) encouraging public universities to develop self-financing projects; and (4) deploying a new loan policy for families of students. These four mega-policies reflect elements of both of the hypotheses detailed in Chap. 1. We can see that access and equity have been served to some degree, but the relatively unplanned nature of this expansion has produced other inequities and more inequality, as the newly emerging HE system lacks the kind of articulation necessary for long-term "system" development. It remains to be seen how well these new policies will affect the demand for and continued massification of Vietnam's higher education landscape, but they are surely positive steps forward.

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Chapter 9
University Enrolment Expansion and Returns to Higher Education: Evidence from China

Lin Ye, Alfred M. Wu and Xinhui Yang

Many countries around the world commit themselves to providing their citizens with equal access to educational opportunities and an even distribution of educational resources through different policies and measures. The policy initiated by China in the 1990s to expand college and university enrolment was intended to enable more citizens to gain access to higher education opportunities.

In the Global Competitiveness Report (2015–2016) by the World Economic Forum, China, among emerging economies, is hailed as a success due to a variety of reasons such as a huge market size and good infrastructure. The enhanced competitiveness of higher education and training makes a good contribution. Compared with other developing economies, Li et al. (2011) notes, China is exceptional in using higher education as a channel for skill upgrading and total factor productivity enhancement. This development strategy sounds effective in reality.

However, the development of higher education accompanied with an expansion policy also comes with potential issues such as increasing employment pressures, decreasing income levels and unpredicted satisfaction. Though these issues have been theoretically discussed in the existing literature, there is a lack of empirical

In the meantime, the higher education sector expanded rapidly, and resulted in a large number of university/college graduates, who found no corresponding positions. The latest study using Chinese General Social Surveys (2005–2006 and 2012–2013) also documents skills mismatch in the labor market particularly in the recent cohort of young graduates. (Mok and Qian 2018).

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research from first-hand statistics. Based on the China Labour-force Dynamics Survey (CLDS 2012) data, this chapter analyses the impact of higher education massification policies on different graduate groups with rigorous research methods. Chapter 1 (Hawkins et al. 2018a, b) in this book has come up with two hypotheses. One is that the massification policy will increase inequality. Therefore, an elite system of higher education would be preferred. In the meantime, vocational and technical education can supplement the elite-oriented higher education system. Hypothesis 2 assumes that a massified system will enhance equity and equality over the long run. Therefore, the policy implications would be that a mass-oriented higher education system still needs to be in place to boost human capital and human development for a better future. Through this research, it was observed that over the past two decades, the increase of salary incomes of university and college graduates has been slower than those of polytechnic school, vocational high school and technical school graduates, and the satisfaction with the income of the former is decreasing. Based on a short period of comparison, we cannot rule out that the returns to higher education may take a longer time to appear. While expanding college and university accessibilities in China, it is suggested to better design college and university education to improve the employment competitiveness of graduates and strengthen their vocational skill training, so as to improve the fair distribution of education resources and push forward social equity and governance innovation. Therefore, our research does not contrast with hypotheses 1 and 2 raised in Chap. 1.

Research Background

In post-Mao China, the reform of the higher education sector has always been an important part of China's educational reform. In its initial stage, the reform of higher education was mainly about the reform of the ownership and administrative systems of colleges and universities. During that period, the enrolment of colleges and universities kept on increasing, yet very slowly. In 1990, the number of enrolled college and university students was about 2.06 million, which was only increased to 3.41 million in 1998.[1] It was in 1999 when the Ministry of Education launched *Action Plan for the Revitalization of Education in the 21st Century* that China witnessed the nationwide mass expansion of higher education enrolment, and the enrolment of colleges and universities started to soar. During the 10-year period from 1998 to 2008, a significant increase in the number of enrolled college and university students was marked by an average increase rate of around 20%. Figure 9.1 shows that the number of enrolled college and university students in China increased by nine times in the 20 years from 1994 to 2014. The population of school-aged children did not increase as substantially during the same period.

On the one hand, the enrolment expansion of higher education may improve its accessibility, bringing it close to a wider population; while on the other hand, it may

[1] Data source: China National Statistics Yearbook, 1990–1998.

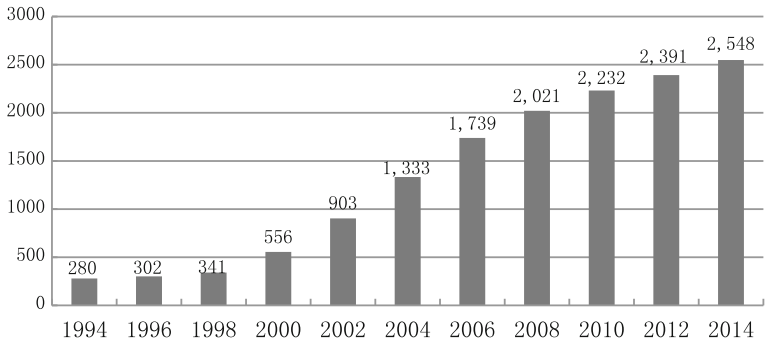

Fig. 9.1 Number of Enrolled College and University Students in China 1994–2014. Numbers are in 10,000. *Data Source* China National Statistics Yearbook, various years

also cause shortages of relevant facilities in colleges and universities, thus resulting in increasing enrolled students competing for scarce education resources in higher education. What is even worse, since a large number of college and university graduates entered the labour market, the rapid increase of graduates has had a significant impact on China's labour market, and the phenomenon of 'graduation means unemployment' has become a serious social issue for college and university students and their families. Some held the view that, with more accessibility to higher education, the overall quality and ability of the general population may be improved, which is positive for the whole of society, while for some, the rapid expansion of higher education in such a short period brings down the value of higher education qualifications in China, and graduates find it hard to hunt for satisfactory jobs. Therefore, increasing access through massification will increase inequality as only a few elite university graduates can find decent jobs while others may be worse off. Notably, after China joined the WTO in 2001, the swift development of China's economy propelled the rapid expansion of the manufacturing industry, creating more job vacancies for blue-collar workers, bringing significant increases in the salary levels of blue-collar workers. In certain regions, there has been a shortage of skilled blue-collar workers over a certain period of time. The supply–demand pattern of the labour-force market changed dramatically within a relatively short time. However, the development of tertiary education in China was not conducted in a sustainable way. As stipulated in *National Medium and Long-Term Talent Development Strategy and Planning* in 2010, China would further enhance the development of higher education, and increase investment in human capital. If the mass expansion of higher education leads to a rise of educated unemployment and reduction of human capital investment returns, the future development of higher education will be hampered in the long run.

Literature Review

Existing studies on the massification of higher education in China are mainly targeted at its impact on impact, employment rate and social mobility. In terms of defining the effects of the massification policy, the first category of studies conducted analysed returns to higher education and employment rate, in which, scholars observed that, based on a household survey in urban China in 2002, the returns to higher education are much higher than that of other lower level educations, such as junior college, high school, polytechnic school and primary school (Luo 2007). Due to an ambition to climb to the apex of global supply chains and demand for skilled labourers, Gao and Smyth (2015) find, returns to education in China have been evident. However, a controversy arises over the yearly changes of returns to higher education based on longitudinal data, where in some research, the returns to higher education kept on rising from 1988 to 2001 (Zhang et al. 2005), while some presented an inverted U shape of the growth of returns to higher education in China, by analysing China Health and Nutrition Survey (CHNS) data from 1991 to 2006, and it was observed that, after the execution of the massification policy, the growth of returns to higher education slowed down and even demonstrated a decreasing trend, thus suggesting that the education expansion has had a squeezing effect on the returns to higher education (He 2009; Meng et al. 2013).

As for employment and income, researchers using a variety of research methods have reached different conclusions. Some studies showed that, though the massification policy brings difficulty for new university/college graduates to seek jobs, leading to decreased labour participation, a higher unemployment rate of graduates and lower hourly rate, there are still obvious income differences between university/college graduates and high school graduates (Wu and Zhao 2010). Other studies using urban household surveys indicate that the increase of human capital resulting from the massification policy is beneficial for improving the employment conditions of labourers, in particular, those of university/college graduates, and the effect of university/college expansion on employment and income is not as bad as surmised (Zhang et al. 2010). Recent evidence nonetheless indicates that the expansion policy has been significantly associated with an increased unemployment rate among young university/college graduates especially in inland China (Li et al. 2014).

The second strand of studies mainly dealt with the relationship between the massification of higher education and social mobility. The studies using the census data showed that citizens in East China and urban regions have benefited more from the massification policy, while females of ethnic groups, residents of rural regions and residents in the West have gained less. The massification policy led to a 9% increase in the unemployment rate of university/college graduates, and 50% of the increase was caused by the declining quality of college and university graduates (Xing and Li 2010). The studies also observed that even though the supply of higher education opportunities shot up over a short period of time, it failed to reverse the unequal access to higher education opportunities among different social strata, among rural and urban regions, and among different ethnic groups (Li 2010). With

the expansion of higher education and the rapid rise of educational expenses, the distribution mechanism of educational opportunities moved against underprivileged families. Currently, since there is a lack of relevant policies and measures, it is quite unlikely for the massification policy to reduce educational inequality, and even more, the opportunities for rural citizens and urban poor citizens to pursue education may be further hampered (Li 2006). In China, with low returns to education, which even demonstrates the 'Matthew effect' whereby the poor receive poorer education compared with the average, it is imperative for higher education investment to lean towards the low-income groups (Zhang 2006).

By reviewing the existing literature, it can be observed that there are still controversies over whether the massification policy can bring desirable returns to education (Yao et al. 2013; Wu and Zhao, 2010), which needs further and thorough analysis with empirical evidence. With a number of limitations due to some factors such as data availability, most extant studies have not analysed whether there are differences in the influences that the massification policy has on different groups, i.e., university graduates (*daxue biyesheng*), college graduates (*dazhuan biyesheng*), polytechnic graduates (*zhongzhuan biyesheng*), and vocational school graduates (*zhigao biyesheng*), and where the policy has the largest impact. Moreover, current studies have not taken into consideration the long-term income changes of university/college graduates after certain working years ever since the implementation of the massification policy. Therefore, based on the data from the China Labour-force Dynamics Survey (CLDS 2012), this chapter studies the impact of the massification policy on the incomes of university/college graduates by analysing different groups of graduates, compared with the satisfaction of graduates with their incomes.

Students enter polytechnic schools (*zhongzhuan*) and vocational schools (*zhigao*) after finishing junior secondary school while students join higher education after they graduate from senior secondary school in China. Both polytechnic schools and vocational schools, slightly different due to their administration systems, aim to cultivate skilled workers through a wide range of training. The qualifications of polytechnic school graduates and vocational school graduates are comparable to those of senior secondary schools. Nowadays, graduates of polytechnic and vocational school graduates are encouraged to join polytechnic colleges to obtain a higher education qualification.

Research Methodology

Hypotheses

The main research questions include: what are the impacts of the massification policy which has been promoted since 1999 on the incomes of different graduate groups? Have there been any differences in the satisfaction of different graduate groups, i.e. university graduates, college graduates, polytechnic graduates and vocational school

graduates, with their incomes before and after the implementation of the massification policy? Therefore, this research compared different graduate groups before and after 1999 when the massification policy was implemented, and conducted intergroup significance tests on their income difference and employment satisfaction. The following hypotheses are proposed:

Hypothesis I: The massification policy will have a negative impact on university/college graduates' salaries as compared with low-qualification holders.

Hypothesis II: The impact of the massification policy on incomes is different according to education level. Four-year university graduates are the most affected financially, followed by 3-year college graduates, and the graduates from polytechnic, vocational and technical schools are the least affected.

Hypothesis III: After the massification policy was implemented, the trend of satisfaction of university graduates, college graduates, polytechnic graduates, vocational and technical school graduates with incomes has been declining.

Data and Variables

We used the China Labour-force Dynamic Survey (2012) for our study—this was the first survey of its kind in China. Samples of the China Labour-force Dynamic Survey included samples from all mainland regions excluding Tibet and Qinghai, which made the samples more representative of China as a country. The PPS (probability proportional to size) sampling method was adopted, which obtained 16,244 individual pieces of data. The principle for the sampling procedure of the China Labour-force Dynamic Survey was: all provinces in China were classified into three strata, i.e. east, middle and west, and then each stratum was divided into Large Province Stratum and Small Province Stratum based on their populations. Large Province Strata are those provinces which have a population of over 60 million in the eastern provinces, over 50 million in the middle provinces, and over 30 million in the western provinces. Samples adopted in this research were selected from the Dynamic Survey, which covered all graduates from vocational schools and above.

In order to observe the impacts of the massification policy on the labour market more directly, this study divided all samples into two groups based on the year when the massification policy was implemented. After screening all samples, 1559 samples which met the requirement of this research were selected, including 630 samples before the implementation of the policy (year 1999) and 929 samples after its implementation. The study further divided the samples before the implementation of the massification policy into two age groups, i.e., Group of age 40–50 (including 40), and Group of Age 30–40 (including 30). Academic qualifications of the samples included four types, i.e. university (*daxue*), college (*dazhuan*), polytechnic school (*zhongzhua*n) and vocational school (*zhigao*). See Table 9.1 for the details.[2]

[2]If no source was indicated, all data included in this paper came from CLDS 2012.

Table 9.1 Descriptive statistics by age and degree

	Before 1999 (ages 40–50)		Before 1999 (ages 30–40)		After 1999	
University (*daxue*)	46	20.5%	69	17.0%	263	28.3%
College (*dazhuan*)	60	26.8%	115	28.3%	270	29.1%
Polytechnic school (*zhongzhuan*)	75	33.5%	138	34.0%	269	29.0%
Vocational school (*zhigao*)	43	19.2%	84	20.7%	127	13.7%
Total	224	100%	406	100%	929	100%

Source China Labour-force Dynamic Survey, 2012

According to the current Chinese education system, we assume that vocational and technical school graduates enter the job market 4 years before university graduates and 3 years before college graduates. The first cohort of university/college students under the massification policy entered higher education in 1999 while the same-age vocational and technical school graduates started their first jobs in 1999.

Data Analysis

Methods

This study compared the salary incomes of full-time university and college graduates with that of polytechnic, vocational and technical school graduates in the same-age cohort. Likewise, the satisfaction of different graduate groups with their incomes was analysed.

Income of Graduates After the Massification Policy

Incomes of College Graduates After the Massification Policy

Table 9.2 shows the comparison between the incomes of college graduates and incomes of polytechnic and vocational school graduates after the massification policy was implemented, in which, 'income difference' (disparity) refers to the salary income of full-time college graduates divided by the salary income of polytechnic or vocational school graduates. 'Between-group t-test' refers to the comparison of the income of full-time college graduates with that of polytechnic and vocational school graduates as to whether the difference is a 'real' one.

Table 9.2 suggests that the income received by college graduates enrolled after 1999 when the massification policy was implemented was higher than the income

Table 9.2 Income comparison among college and other graduates after 1999

	Monthly income (1000 RMB)	Income disparity	Sample size	Between-group t-test (*p* value)
Full-time college graduates (enrolled after 1999)	2.45	1	270	
Polytechnic school graduates (enrolled after 1996 since students did not go to senior secondary school)	2.4	1.021	269	insig. (0.0886)
Vocational school graduates (enrolled after 1996 since students did not go to senior secondary school)	2.4	1.021	127	insig. (0.3958)

Note T-test refers to the difference between college graduates and polytechnic school graduates and that between college graduates and vocational school graduates

Table 9.3 Income comparison among university and other graduates after 1999

	Monthly income (RMB 1000)	Income disparity	Sample size	Between-group t-test
Full-time university graduates (enrolled after 1999)	3	1	263	
Polytechnic school graduates (enrolled after 1996)	2.4	1.250	269	sig. (0.0000)
Vocational school graduates (enrolled after 1996)	2.4	1.250	127	sig. (0.0000)

of polytechnic and vocational school graduates of the same-age cohort, yet without statistical significance.

Income of University Graduates After the Massification

Table 9.3 suggests that by comparing the income of university graduates and that of polytechnic and vocational school graduates, the income received by university graduates enrolled after 1999 when the massification policy was implemented was higher than that of polytechnic and vocational school graduates of the same age. The difference is significant suggesting a pay-off, albeit not substantial, for university graduates after the massification policy.

Through examining Tables 9.2 and 9.3, the results from the between-group t-test indicate that university/college graduates have advantages over polytechnic and vocational school graduates in terms of incomes received although university graduates had done a better job in terms of remuneration.

Table 9.4 Income comparison among college and other graduates before 1999 for the age group of 30–40

	Monthly income (RMB 1000)	Income disparity	Sample size	Between-group t-test (*p* value)
Full-time college graduates (enrolled before 1999)	3.6	1	115	
Polytechnic school graduates (enrolled before 1996)	3	1.2	138	sig. (0.0003)
Vocational school graduates (enrolled before 1996)	2.5	1.44	84	sig. (0.0362)

Income of Graduates Before the Massification Policy

Income of College Graduates Before the Massification Policy (Ages 30–40)

As the graduates before the massification policy varied greatly with regard to age, we compared the income of graduates aged 30–40 first. Table 9.4 suggests that before the massification policy was implemented, the incomes of college graduates aged between 30 and 40 were significantly higher than those of polytechnic and vocational school graduates of the same age.

Income of College Graduates Before 1999 (Ages 40–50)

Table 9.5 suggests that the income of college graduates aged between 40 and 50 were significantly higher than that of vocational and technical school graduates of the same age, yet with no significance when compared with the income of polytechnic graduates. In terms of the income gap, when people grew older, the returns to higher education became more substantial before the massification policy was introduced. For example, the gap between college and vocational school graduates was RMB 1600 in the survey period.

In general, based on Tables 9.4 and 9.5, before the massification policy was introduced, college graduates did have a substantial pay-off due to higher education and the income of college graduates increased as time passed. This may suggest that before the massification policy, the higher education system was elite oriented. Even if graduates held college diplomas, they still earned substantially more than polytechnic and vocational school graduates.

Table 9.5 Income comparison among college and other graduates before 1999 for the age group of 40–50

	Monthly income (RMB 1000)	Income disparity	Sample size	Between-group t-test (*p* value)
Full-time college graduates (enrolled before 1999)	4	1.000	60	
Polytechnic school graduates (enrolled before 1996)	3	1.333	75	insig. (0.0787)
Vocational school graduates (enrolled before 1996)	2.4	1.667	43	sig. (0.0048)

Table 9.6 Income comparison among university and other graduates before 1999 (Ages 30–40)

	Monthly income (RMB 1000)	Income disparity	Sample size	Between-group t-test (*p* value)
Full-time university graduates (enrolled before 1999)	6	1	69	
Polytechnic school graduates (enrolled before 1996)	3	2	138	sig. (0.0000)
Vocational school graduates (enrolled before 1996)	2.5	2.4	84	sig. (0.0000)

Income of University Graduates Before 1999 (Ages 30–40)

Returns to higher education for university graduates were much higher prior to the massification policy. Table 9.6 suggests that before the massification policy was implemented, the income of university graduates aged between 30 and 40 was significantly higher than that of the polytechnic and vocational school graduates of the same age. University graduates earned twice the amount received by polytechnic school graduates.

Income of University Graduates Before Massification (Ages 40–50)

Table 9.7 further indicates that the income gap between university graduates and polytechnic and vocational schools was substantial. University graduates earned on average a monthly income of RMB 2500 more than polytechnic school graduates although t-tests indicate insignificance in these comparisons.

Based on Tables 9.6 and 9.7, it can be observed that under the elite-oriented higher education system, university/college students earned substantially more than polytechnic and vocational school graduates. This indicates strong returns to higher education during the period.

Table 9.7 Income comparison among university and other graduates before 1999 (Ages 40–50)

	Monthly income (RMB 1000)	Income disparity	Sample size	Between-group t-test (*p* value)
Full-time university graduates (enrolled before 1999)	5.5	1.000	46	
Polytechnic school graduates (enrolled before 1996)	3	1.833	75	insig. (0.0787)
Vocational school graduates (enrolled before 1996)	2.4	2.292	43	insig. (0.0048)

Table 9.8 Satisfaction of full-time university/college graduates with income (%)

	College enrolment (pre-1999)	College enrolment (post-1999)	University enrolment (pre-1999)	University enrolment (post-1999)
Very satisfied	7 (3%)	1 (0.35%)	6 (3.95%)	5 (1.86%)
Satisfied	58 (24.89%)	60 (21.13%)	49 (32.24%)	69 (25.65%)
Average	99 (42.49%)	128 (45.07%)	63 (41.45%)	132 (49.07%)
Dissatisfied	58 (24.89%)	72 (25.35%)	30 (19.74%)	50 (18.59%)
Very dissatisfied	10 (4.29%)	21 (7.39%)	4 (2.63%)	10 (3.72%)
N/A	1 (0.43%)	2 (0.7%)	0 (0%)	3 (1.12%)
Total	233 (100%)	284 (100%)	152 (100%)	269 (100%)

Graduates' Satisfaction with Income

Table 9.8 shows that about 27.9% of college graduates enrolled before 1999 were 'very satisfied' and 'satisfied' (collectively classified as 'satisfied') with their incomes, and about 29.1% were 'dissatisfied' and 'very dissatisfied' (generally classified as 'dissatisfied') with their incomes, while for college graduates enrolled after 1999, about 21.5% were satisfied with their incomes, and about 32.7% were dissatisfied. For university graduates who were enrolled before 1999, around 36.2% were satisfied, and around 22.4% were dissatisfied, while for those enrolled after 1999, about 27.5% were satisfied, and about 22.3% were dissatisfied. So the enrolment year of 1999 is a watershed, after which, the satisfaction with incomes of university and college graduates decreased to some extent.

It can be observed from Table 9.9 that about 27.9% of polytechnic graduates enrolled before 1996 were satisfied with their income, and about 30.8% were dissatisfied, while for those enrolled after 1996, around 24.4% were satisfied, and around 28.1% were dissatisfied. In terms of vocational school graduates, for those enrolled before 1996, about 22.5% were satisfied with their income, and about 31.7% were dissatisfied, while for those enrolled after 1996, about 25% were satisfied, and about 26.3% were dissatisfied. In general, the data analysis results indicate that after the

Table 9.9 Satisfaction of polytechnic and vocational school graduates with income(%)

	Polytechnic school enrolment (pre-1996)	Polytechnic school enrolment (post-1996)	Vocational school enrolment (pre-1996)	Vocational school enrolment (post-1996)
Very satisfied	10 (2.94%)	7 (2.34%)	0 (0%)	3 (2.08%)
Satisfied	85 (25%)	66 (22.07%)	37 (22.56%)	33 (22.92%)
Average	136 (40%)	141 (47.16%)	75 (45.73%)	69 (47.92%)
Dissatisfied	88 (25.88%)	60 (20.07)	39 (20.12%)	27 (18.75%)
Very dissatisfied	17 (5%)	24 (8.03%)	19 (11.59%)	11 (7.64%)
N/A	4 (1.18%)	1 (0.33%)	0 (0%)	1 (0.69%)
Total	340 (100%)	299 (100%)	164 (100%)	144 (100%)

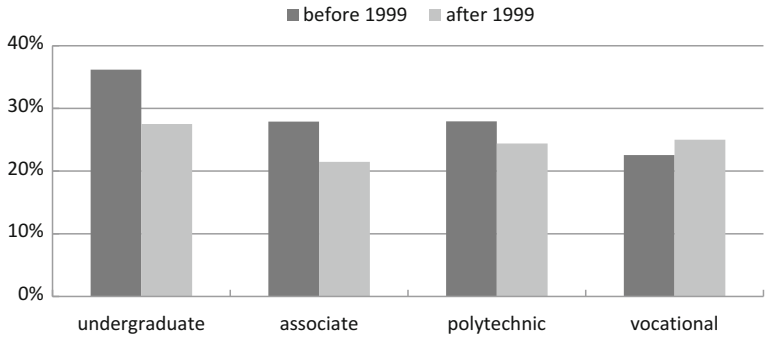

Fig. 9.2 Income satisfaction rate before and after 1999 (dark bar: very satisfied, grey bar: satisfied)

massification policy was initiated, except for vocational school graduates, the satisfaction with the incomes of graduates from university, college and polytechnic school decreased (Fig. 9.2).

Findings and Suggestions

It was found through a series of data analysis that the aforementioned three hypotheses have all been confirmed to a certain extent.

Before the massification policy, the income gap between university/college graduates and polytechnic and vocational school graduates was substantial. By comparing the incomes of different graduate groups before the massification policy, incomes of graduates were significantly affected by their educational attainments although, in some age groups, the t-tests were not significant. This also reveals that the income gap would increase when workers reach senior positions. As the higher

education system is rather new in China compared with developed economies, the returns to higher education, especially under the elite-oriented system, are quite substantial.

With the massification policy implemented, returns to higher education have declined as compared with other income groups. Salaries of university/college graduates, compared with those of polytechnic and vocational school graduates, are relatively decreasing. Before 1999 when the massification policy was implemented, the incomes of college graduates were significantly higher than those of polytechnic and vocational school graduates of the same age. After 1999, though the incomes of college graduates were higher than that of polytechnic and vocational school graduates of the same age, the difference was not substantial. Similarly, the incomes of university graduates enrolled before 1999 when the massification policy was initiated were significantly higher than those of polytechnic and vocational school graduates of the same year, yet after 1999, though the t-tests suggested significant differences, the income gap has been shrinking. It can be concluded that university and college graduates faced the crisis of 'diploma depreciation' to a certain extent.

The massification policy has had a significant impact on income satisfaction. The income satisfaction of university/college graduates after massification has been decreasing, and their dissatisfaction increasing. Compared with college graduates, the income satisfaction of university graduates is higher. The income satisfaction and dissatisfaction of polytechnic graduates enrolled after 1996 are both decreasing, which indicates the complex influence of the massification policy over the income satisfaction of polytechnic graduates. The income satisfaction of vocational school graduates enrolled after 1999 has been increasing which may indicate a good match between vocational school graduates and the jobs they acquire. The income satisfaction of university graduates, college graduates and polytechnic graduates have all been decreasing, thus it sounds as if college graduates have suffered more. It is true that massification is not the only factor influencing the income satisfaction of graduates, and working environment, work content, and so on may also exert an impact on income satisfaction.

Discussions and Policy Implications

The findings of this research show that the massification policy has had an impact on the income competitiveness of higher education graduates, which is caused by many factors. For example, the massification of higher education has reduced the admission standards of universities and colleges; therefore, the average quality of graduates is decreasing, and the average income growth rate of university/college graduates is slower than that of polytechnic, vocational school graduates. Another explanation is the changes in the labour market and employment structure. In the early twenty-first century, with the rapid development of China's manufacturing industry, a large number of blue-collar workers were needed, most of whom graduated from polytechnic

or vocational schools. In the meantime, the higher education sector expanded rapidly, and a large number of university/college graduates were produced by higher education, who found no corresponding positions. The unbalanced supply and demand in the market led to the salary decrease of university and college graduates, and their satisfaction with income dropped. Besides, the socio-economic structure of China has also had an impact on the income and income satisfaction of university and college graduates.

The massification policy aimed to increase university accessibility for citizens and promote an equal distribution of educational opportunities. However, the rapid expansion of higher education has affected the incomes and job satisfaction of university/college graduates to different degrees. In reality, the policy related to distributional equality aims to pursue quality in the first place instead of quantity; otherwise, 'low-level equality' may be generated, which is opposed to distributional equity and harmonious socio-economic development. Regarding the issues caused by the massification policy in relation to incomes and the satisfaction of university/college graduates, this research has led to the following policy implications.

As far as the government policy is concerned, it is suggested that, while expanding the accessibility to higher education and providing equal educational opportunities, the government should guide higher education to be more targeted, professional and career oriented, strengthen vocational skill training, and increase the employment competitiveness of university/college graduates, so that educational resources can be fairly distributed and social equality realized. Besides, it is suggested that the government improve its employment policy and career services for university/college graduates. In line with the current strategy to increase employment opportunities, the government should, while improving the employment of university/college graduates, use policy tools to strike a balance between supply and demand in the labour market, and achieve good allocation of human resources overall. Moreover, it is suggested that the government establish a long-term employment statistics system, so that employment data and information collected can help higher education decision makers to come up with informed decisions.

As far as higher education institutions are concerned, it is suggested that while teaching the required courses of their students' own majors, colleges and universities should widen the sphere of knowledge of their students, and establish curricula according to the market demand. By doing so, the general quality of their students can be improved, and the flexibility and adaptability of students can be strengthened to better adjust to market changes. It is also suggested that universities and colleges provide their students with more channels for internships which can better cultivate students' capability to be more market oriented. Universities and colleges should establish more applied learning curricula to improve the hands-on capabilities of their students. Moreover, university–enterprise collaboration should be explored and enhanced, so that universities and colleges can better grasp the needs of enterprises for talents and professionals. At the same time, given the existing conditions, universities and colleges should provide as many opportunities for their students with more internships and in-house training, so that they can understand and experience different cultures of workplaces, and appreciate the needs of enterprises for different

professionals. By doing so, the concept of 'the massification of higher education' (*gaoxiao kuozhao*) can move towards 'improving the quality of education' (*jiaoyu tizhi*), and, while strengthening all-round quality-oriented education, colleges and universities should educate and provide graduates both professional and practical skills needed for the burgeoning market economy.[3]

In general, the findings of this study provide evidence of the impact of the massification policy. Although the massification policy will bring more students into higher education, students from poor families may not be joining. Declining returns to education and the dissatisfaction with higher education may hinder personal motivation to pursue higher education. Especially, it will drive out students from a poor family background as they need to compare returns to higher education with investments carefully.[4] An unbridled development of higher education will lead to worsened equity and equality over the long run. Therefore, the government and higher education institutions should attend to the negative impact of the massification policy.

There are inevitably some limitations of this study. For example, in terms of the selection of samples, there were very limited samples of college and university students, and the average ages of the selected samples were young; ideally, returns to education should look at a longer period of time after graduation.[5] In terms of research methods, more controlled variables can be included in future research. More specifications should be adopted to analyse the systematic influence of education on income and returns to higher education based on family background and other socio-economic factors. Social returns to higher education such as the impact of higher education qualifications on quality of life should be studied as well.

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[3]On the debate on quality of higher education, please see Hawkins et al. (2018b).

[4]UNESCO Institute for Statistics (2014) notes that in Asia, 'There are still large discrepancies in access related to differences in family wealth. The poor remain disproportionately limited in their access to higher education' (p. 12). Yang (2010) notes the significantly negative impact of the massification of higher education on China's poor families wherein they rely on education to move up the economic ladder.

[5]We do not differentiate jobs in the public or private sector. Public sector remuneration is highly regulated (Wu 2014).

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Chapter 10
Higher Education Governance and Institutional Research: The Emergence of a New Role in the Post-massification Era in Japan

Reiko Yamada and Aki Yamada

Massification of higher education has two meanings. A massified system of higher education can be observed worldwide. A massified system of higher education improves access by students. On the other hand, as a result of massification, students who are less prepared for university study, and lack basic knowledge, the appropriate study skills, and the necessary motivation are entering higher education. Then, the quality assurance of higher education becomes the spotlight as an important issue. In Japan, the results of massification of higher education call for a new agenda. The emergence of strong government control of higher education is observed in order to achieve quality assurance of higher education. The impact of massification of Japanese higher education appears to be associated with the latter meaning.

In such environment, IR for teaching and learning improvement has rapidly developed in Japanese higher education institutions. Since quality assurance is the major concern for all Japanese higher education institutions, IR based on the improvement and assurance of education has become an essential activity. In this paper, after reviewing new environment around Japanese higher education and the trend of higher education policy of Japanese higher education, the relationship of quality assurance, university governance, and the role of IR will be examined.

In 2014, the School Education Law and National University Corporation Law in Japan were revised in order to establish the leadership of the president and strengthen university governance. The issue of university governance has become a matter

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of extreme importance. In such environment, Institutional Research (IR) has been regarded as an effective tool for assisting university governance. As a result, IR offices will most likely become charged with the concrete responsibilities of collecting, quantifying and visualizing various types of internal university information, as well as managing such data in order to help the decision-making process for university governance. We conducted a nationwide survey on the IR function for all Japanese four-year universities in 2014. The findings of the survey indicate that Japanese IR activities are mostly divided into three categories. The first activities are categorized as the IR activities in association with teaching and learning. These IR activities include student surveys for assessing learning outcomes, GPA analysis, analyzing student evaluation and FD effectiveness for example. The other IR category is associated with dealing with accreditation, information disclosure. However, the findings suggest a new trend. The recent rash of IR section establishment has been urged under external pressure in order to strengthen university governance.

In Japan, 15% of a specific age group are enrolled in higher education institutions and mass higher education at a stage when 15–50% of the age group enter higher education institutions. Post-massification, or so-called universal higher education, is a stage where more than 50% of the age group have access to higher education (Trow 1974). Japanese universities are in the stage of post-massification. With 49.9% of high school graduates enrolling in higher education in 2003, Japan has already entered the post-massification phase of higher education in the mid of 2000s.

The rate of going to college in Japan reached over 55% in 2014. In such situation, almost all students who desire to enter university will be able to gain admission, which explicitly implies that students with less preparation for university studies, in terms of basic knowledge, study skills, and motivation, will enter higher education. This phenomenon urges Japanese universities to develop more learning-centered higher education programmes and teaching, and learning issues have been widely discussed in higher education institutions. In such post-massification stage and the globalization era of higher education, many countries have started to strengthen the assessment of learning outcomes. Behind the move to strengthen the assessment of learning outcomes, there is a common trend of quality assurance worldwide. Japan is no exception. Recent Japanese higher education policy has shifted to being learning outcome-oriented, and to assure quality, university governance has been strengthened and assured by the amendment of the School Education Law. As a result, Institutional Research is expected to be established within universities in order to support university governance and management.

Hawkins et al. (2018) propose two hypotheses when they had APHERP Hong Kong Senior Seminar in 2014. The first hypothesis states that massification of higher education either actually or eventually increases inequality. An alternative hypothesis implies that a massified system nevertheless increases “long-term” equity and equality. In order to respond to these two hypotheses, in this paper, after reviewing the new environment around Japanese higher education, we examine the relationship between quality assurance for education, university governance, and the role of IR.

To do so, we consider the survey concerning IR which was conducted from the end of 2013 to early 2014 for all Japanese four-year higher education institutions.

Emergence of Accountability as a Result of Massification

Universities and colleges worldwide are presently expected to take on responsibility for the quality of their education, with quality assurance becoming a common topic for higher education institutions in many nations. Behind this quality assurance movement is emerging the issue of accountability, which Zumeta (2011) describes as a responsibility for one's actions to another individual—or to multiple parties—as a result of legal, political, financial, personal, or simple moral ties.

Accountability is associated with every aspect of society. Observing the emergence of neoliberal policy across many nations around the world during the early 1990s, Van Vught and Westerheijden (1994) explain the concerns of governments and other interest groups with respect to accountability, which Berdahl and McConnell (1994) define as being answerable to various constituencies for a responsible performance. The concept of accountability involves the evaluation and measurement of performance, as well as the monitoring of all functions of a university. Herein, the general public becomes more involved with higher education institutions than in the past, calling for educational and research outcomes while also expressing criticism when not satisfied with a higher education institution's effectiveness or performance. In this schema, learning outcomes become critical for securing quality as well as demonstrating institutional accountability.

At the same time, the emergence of globalization in the twenty-first century has also seen the acceleration of accountability in higher education throughout the world, with quality assurance among higher education institutions and the enhancement of global competitiveness becoming major concerns (Yung-chi 2012). Thus, higher education policy around the world has become more market-conscious and economics-centered, while also being influenced by governmental policy shifts toward deregulation. Within the framework of neoliberalism, which has recently been strengthened in many nations around the world, education and research are regarded as indispensable for national development. Although less public money is available for educational sectors overall within this framework, budgets tend to be concentrated within the fields of technology, science, and markets, and has resulted in the competition among higher education institutions.

The emergence of strong accountability, the quality assurance movement, and serious competition have accelerated the requirement for strong governance of higher education institutions. Japan is no exception. The School Education Law and National University Corporation Law in Japan were revised in order to establish the leadership of the president and strengthen university governance in 2014. These laws became effective from the year 2015. Hence, the issue of university governance has become a matter of extreme importance. In such environment, institutional research (IR) has been regarded as an effective tool to assist university governance and develop a solid

internal quality assurance system. Therefore, Japanese higher education institutions have started to establish IR offices.

IR, which is often translated into Japanese as "university institutional studies" or "institutional research", is said to have first appeared on the scene among institutions of higher education in the United States during the 1960s. IR offices are charged primarily with collecting, analyzing, and managing various sorts of internal university data, including information relating to education, business management, and finance, as well as formulating strategic planning and putting together reports and self-assessment documents to submit to accreditation organizations. As such, IR offices have become permanently established within many U.S. institutions of higher education. While such positioning means, on one hand, that IR offices help to support decision-making within organizational operations, they are also tasked with collecting and analyzing data for educational improvement, as well as developing student surveys to be used as a tool in this regard. It may also be said, therefore, that IR offices are closely involved with educational quality assurance efforts within their respective institutions.

IR offices will also be tasked with utilizing the results of these analyses for initiatives including education, research, student support and management. Depending upon the ways in which it is utilized, IR additionally holds significant potential to function as a system of internal quality assurance.

While this would necessitate the clarification of significant matters such as where within the institution to position the IR office, and who would be in charge of it, it is unquestionable that the cultivation of a "culture of assessment" based upon objective data is indispensable for the continuing development of higher educational institutions in Japan.

Further, in Japan, university governance has become the most important issue as mentioned above. To make the university governance effective, the role of IR is being rapidly highlighted. In this context, the relationship of university executives and IR section or IR data is the key for strengthening university governance. As a result, IR offices will most likely become charged with the concrete responsibilities of collecting, quantifying, and visualizing various types of internal university information, as well as managing such data in order to help the decision-making process for university governance.

Changing Japanese Higher Education Environment

Quality Assurance and IR

With IR offices involved in issues closely related to the disclosure of information, as well as handling data that are not meant for public release, such sections have been classified as internal university organizations. As such, they are not actively involved in the outside transmission of data. In other words, they serve as institutional sections

that manage important data for the university as a whole, while also serving the function of identifying information that is critical from a decision-making standpoint.

We shall now turn our attention toward the question of why IR suddenly has become the object of so much attention. With the abrupt introduction of the demand for educational quality assurance through university learning experiences, we believe that one factor in this regard is the way that individual universities—in addition to higher education as a whole—have been highlighted within developing discussions regarding the importance of demonstrating educational outcomes. In terms of the measurement of educational outcomes for each university, it has been recognized that the basis for educational quality assurance is the collection and measurement of educational data, as well as the way that such results are then utilized to make improvements. In reality, however, while many institutions of higher education share the necessity for educational improvement, many of them implement their current assessments not through objective data, but rather via the subjective views and experiences of individual instructors. In this way, we may see that IR is making a fundamental transition from educational evaluations based upon views and experiences to a culture of current assessment based upon objective data.

After Japan's national universities were turned into national university corporations in 2004, it became possible to accumulate and manage the dispersal of data regarding financing, students, academic affairs, etc., among various individual offices and sections. For national universities that were expected to announce mid-term goals and review their activities, the centralization of data became a particularly important strategy at the time. In addition, amidst the rapid calls for educational quality assurance through learning experiences, the demonstration of educational outcomes has become an important issue for all institutions of higher education—whether national or private. For those universities targeted for assessment, therefore, the matters of measuring educational outcomes, as well as how educational data are collected and measured—and how the results thereof connect to the implementation of improvements—have all become matters of great significance.

As a result, higher education institutions are obliged to assure the quality of student learning outcomes and their educational programmes. This trend can be simultaneously developed worldwide. This is the common trend of the higher education policy shift toward quality assurance around the world.

For example, a tuning movement has been developed widely across nations. Participants of the AHELO (Assessment of Higher Education Learning Outcomes) Feasibility Study reached approximately 23,000 from 250 higher education institutions in the world. In the United States, the Postsecondary Institutional Ratings System (PIRS)[1] came into being in the year 2015 in order to rate the performance of the learning outcomes of each institution. The Science Council of Japan has engaged in establishing the standard framework of disciplines. "The University

[1] https://www.insidehighered.com/quicktakes/2013/12/17/obama-administration-seeks-input-how-develop-ratings.

Portrait"[2] started in 2014. Like this, we can find common higher education policy shifts toward being learning outcome-oriented and these practices have actually been implemented across nations.

Competitive Funds to Support University Educational Reform and Learning Outcome-Oriented Higher Education Policy

Due to the universalization of higher education, it is becoming increasingly difficult to maintain the quality of university students through the selection at enrolment. As a result, the focus of quality assurance policies in Japanese higher education institutions has shifted from the entrance stage to the exit stage. Adoption of the grade point average (GPA) system, clarification of admissions, curriculum and diploma policies, and the acceleration of faculty development are further examples of quality assurance initiatives. In 2010, it was reported that 46% of universities and colleges had introduced GPA systems and had developed rigorous grade control systems (MEXT, 2010).[3]

In 2012, the Central Council for Education released a report entitled "To Transform the Quality of University Education for the Future: The Role of University Education to Cultivate Students Who Can Learn throughout Life and Think Proactively". The report urges institutions of higher education to achieve the qualitative transformation of undergraduate education. The report notes that the majority of institutions of higher education institutions have implemented reforms including the introduction of first-year seminars, syllabi, and active learning styles in the past decade. Since professional development has been mandated, many faculties have become more teaching-centered.

The 2012 CCE Report is regarded as a turning point in the shift among Japanese institutions of higher education towards a learning outcome orientation. In addition, the report touches frequently on issues related to university governance and effective management, which contributed to the revision of the School Education Law and National University Corporation Law in 2014.

IR for teaching and learning improvement has developed in Japanese higher education institutions. Since quality assurance is the major concern for all Japanese higher education institutions, IR based on the improvement and assurance of education has become an essential activity. The process of quality assurance and IR for teaching and learning is illustrated in Fig. 10.1.

[2]"The University Portrait", a database system, was introduced by the leadership of the MEXT in 2014. All higher education institutions are supposed to provide basic data to this database like IPEDS in the United States in order to respond to the demand for information disclosure.

[3]For the details, please see http://www.mext.go.jp/a_menu/koutou/daigaku/04052801/__icsFiles/afieldfile/2014/11/18/1353488_1.pdf.

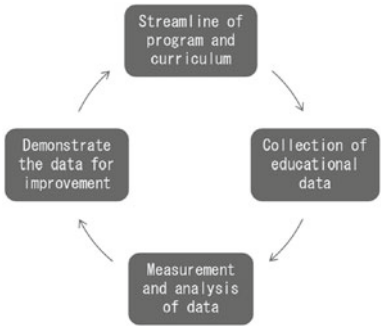


Fig. 10.1 Process of quality assurance and IR for teaching and learning

IR and Information Disclosure

With the existing need to prepare quantitative evidence-related data and assessment reports, it becomes possible to define IR from an informational perspective that encompasses the operation and utilization of informational systems, as well as the collection and analysis of information regarding various university initiatives. When the materials and data that are necessary for university assessment are collected and maintained, it becomes possible to smoothly and effectively draw up self-assessment and performance reports. The above process necessitates searching for and then compiling accumulated data that are procured from the related departments in question—not an easy task for large-scale institutions by any means. The presence of a productive IR office, therefore, greatly helps to decrease the workload with respect to assessments.

University information databases include statistical information from the Ministry of Education, Culture, Sports, Science & Technology in Japan (MEXT), such as the School Basic Survey and the School Teachers Survey. Such databases were not designed, however, to be utilized either flexibly or effectively. And while numerous universities are now beginning to maintain databases that include information regarding the research achievements of their faculty, the fact that many institutions do not have IR offices means that such data are not actually utilized in an effective manner, and that existing databases are also subject to limitations insofar as they are not able to be utilized for assessments, nor for publicly disclosing the information that society now often demands from university institutions.

With regard to the proactive disclosure of information in this regard, Article 113 of the School Education Act states that "insofar as universities contribute to the promotion of disseminating and utilizing the results of education and research activities, they shall make disclosures with regard to such information". In addition, Article 2 of the Standards for Establishment of Universities states that universities are required to proactively provide information in this regard. According to a MEXT survey conducted in 2008, the rate of universities with websites had risen to 100%. Formats varied widely, however, with respect to information regarding the number of faculties and students, syllabi, and educational details, while some university websites did not even include even the most basic information. In addition, some universities have

reportedly failed to comply with requirements to disclose information regarding their self-check and assessment results.

The disclosure of education-related information became compulsory starting in 2011, and this matter was brought up as an important issue of concern during the 5th Central Council for Education. It may also be said that this matter is extremely closely related to IR, insofar as the advancement thereof makes possible the construction of standard databases. The University Portrait started in 2014. The University Portrait consists of two different database systems between national and public universities and private universities.

National university corporations and public universities use the database managed by the National Institution for Academic Degrees and University Evaluation (NIAD) and private universities and junior colleges utilize the database managed by Private School Mutual Aid.

We would like to consider the case of the United States as an example in this regard. When doing so, it is essential to take a broad view that encompasses both the standardization of information disclosure among institutions of higher education as a whole, as well as that which takes place among separate institutions on an individual basis. The Integrated Postsecondary Education Data System (IPEDS) is a comprehensive database that is tasked with collecting data from higher education institutions and other organizations throughout the entire United States. If individual institutions were to apply to the federal government for grant programmes or other types of assistance, they would in practice be required to submit data to the IPEDS, including institutional characteristics, data sorted by academic degree level regarding the numbers of graduates, students enrolled, course hours, full-time equivalent enrolment, and human resources and additional information such as that regarding enrolees, finances, economic assistance provided to students, rate of graduation, etc.

In addition to the IPEDS, there is another example of a common database in the United States. The Spellings Report, released by the Commission on the Future of Higher Education (also known as the Spellings Commission) that was overseen by U.S. Secretary of Education Margaret Spellings, served to both symbolize and respond to such criticisms of the IPEDS (U.S. Department of Education 2006). This report, which pointed out the three keywords of access, affordability, and accountability, aimed to promote the reform of the entire U.S. higher educational system. Access refers to the expansion of opportunities for higher education; affordability is a concept relating to the cost thereof; and accountability refers to information disclosure—in other words, the idea of making student learning outcomes clearly available while budgets for higher education continue to expand. Information disclosure in the United States is often referred to using the term “transparency”, which means explaining the content of something in terms simple enough for anyone to comprehend. The Spellings Report called for disclosing information in a way that university and high school students, parents and guardians, and society at large would be able to understand, and that would enable comparisons to be made between individual institutions for higher education. In response to this report, a database known as the College Portrait was launched in December 2007 as part of the Voluntary System of Accountability (VSA).

The VSA refers to a database of public four-year universities, while the College Portrait is a web-based report utilizing a common format wherein basic data regarding undergraduate education are able to be compared with that of other institutions. The database was intended to be shared with university and high school students, their parents and guardians, and others in society. The main functions of the database are as follows: (1) to provide tools that will make it easier for high school students to select universities; (2) to include information that is transparent, able to be compared, and easy to understand; (3) to be subject to public accountability; and (4) to measure educational outcomes in order to increase the effectiveness of education, as well as the understanding thereof.

While it cannot be denied that universities are expected to publish information that may not portray them in the best light, a major purpose of the database is to include common indicators in order to compare results from different universities. The compulsory publicizing of education-related information in Japan would also seem to indicate that attention is being paid to accountability as it is in the United States; therefore, there is a strong accountability issue behind the development of a common database for this purpose, while the method of information disclosure is also left up to the discretion of each individual university.

New Amendment of the Law in Japan

The disclosure of education-related information became compulsory starting in 2011 and the common database, The University Portrait, started in 2014 as a result of dealing with accountability from overall society including several stakeholders. At the same time, the School Education Act was amended in 2014 and the National University Corporation Law was amended in 2014. The 2014 amendment is symbolic of this new government control.

The major revisions of these laws include clear definitions of the role and authority of university president, vice president and faculty meetings. Therefore, the amendments are able to bolster the strong leadership of university president and limit the authority of faculty meetings. The laws have been effective from 2015 and Japanese higher education institutions are obliged to revise internal school regulations. Although the School Education Act applies to both national university corporations and private universities, the National University Corporation Law is only applicable to national university corporations. Thus, the governance of national university corporations is strongly regulated by these two laws. It is assumed that the governance of national university corporations will be similar to corporate governance.

Research Framework and Previous Studies

Quality assurance is the common theme of higher education institutions around the world. Figure 10.2 shows the relationship of framing strong governance and quality

assurance movements at institutional, national, and transnational levels. Movements at transnational level affect the quality assurance movement and indirectly affects the framing of strong governance at the Japanese national level. It is explained that strong governance becomes necessary in order to promote quality assurance at each higher education level and national level. In Japanese higher education institutions, such function of overall information collection and planning is conventionally conducted in the office of planning. Assessment and analysis is conducted in the IR sections. Curriculum planning and streamlining of curricula is conducted in each academic department and school. Such decentralized function makes comprehensive quality assurance at institutional level difficult and thus becomes impossible to deal with accountability issues at national and transnational levels. So, as mentioned in the previous section, the government revised the two laws regarding university governance which enables strong leadership by the president and strong university governance. It is expected that strong university governance will promote quality assurance by transforming decentralized systems into a centralized system.

Utilizing IR as an effective tool is expected to enhance governance and management. In concrete terms, the IR section integrates all of the decentralized internal information and data, analyzes these data, and reports to the university executives in order for them to utilize the result of analysis for decision-making and management. Hence, there is a national high expectation of IR and many Japanese higher education institutions have rushed to establish new IR offices. Considering such environmental change and trend, I examine how IR has been recognized and positioned in Japanese higher education institutions based on the recent national surveys. In particular, I explore the role of IR and the relationship with university governance.

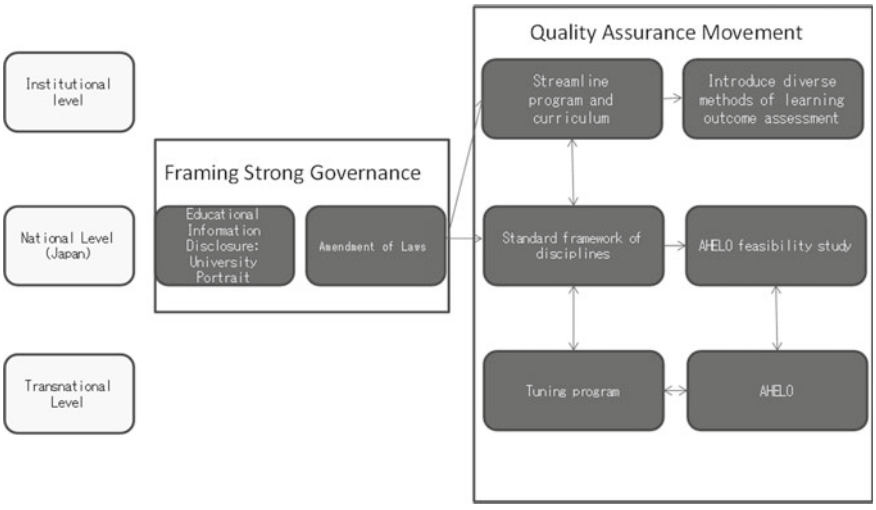


Fig. 10.2 The relationship of framing strong governance and quality assurance

Most previous IR-related studies took place in the United States. According to Saupe (1990), "IR provides information that supports organizational planning, policy formulation, and decision-making", while Peterson and Corcoran (1985) add to this list "resource allocation among all fields, management and assessments". Maassen (1986) described the four major work tasks assigned to IR specialists as follows: (1) collecting data (materials) regarding institutional performance (outcomes), (2) collecting data (materials) concerning the institutional environment, (3) analyzing and interpreting the collected data (materials), and (4) converting these analyses and interpretations into information able to help formulate institutional planning, policies, and decision-making.

Volkwein's research in 1990 and 1999 showed the IR's role as the organization and the IR golden triangle model. The golden triangle model extracts the common practices of IR sections across the institutions. This commonalty can be summarized in that IR activities concentrate on reporting, policy analysis, strategic planning, enrolment management, financial analysis, quality assurance and assessment of learning outcomes, programme reviews, and measurement, and dealing with accreditation. However, the degree of importance of these activities differs according to the type and size of institutions. Also, the difference depends on how university governance is centralized or decentralized.

On the other hand, in Japan, there are little theoretical studies of IR. Instead, Oki (2009) and Takada et al. (2012) conducted a nationwide IR survey for Japanese higher education institutions.

Both surveys showed that the term IR was not prevalent in Japanese higher education institutions and although very similar types of offices dealing with the activities described in Volkwein's golden triangle model have been established, the name used for such offices is not IR. Also, the major role of Japanese IR is regarded as dealing with accreditation and university evaluation from outside.

However, these surveys were conducted before the role of IR and quality assurance received much attention. Furthermore, the models presented by Volkwein cannot be applied to premature Japanese IR. Recently, attention to IR in Japan has accelerated in accordance with the quality assurance and strong governance movement. There is a possibility that IR is regarded as a magic word as a tool for enhancing strong governance and effective management. However, the reality is that not enough theoretical and survey researches of IR have been conducted and further there is only a short history of IR development in Japanese higher education. So it is significant and timely to examine the role of IR in such environment through the updated information based on the survey.

Findings

Overall Picture of Japanese IR

We conducted an IR survey for all Japanese four-year higher education institutions sponsored by the MEXT in December 2013. When conducting the survey research, given that a common definition and recognition of IR principles is not clearly established in Japanese higher education institutions, we defined IR as a tool to realize the mission statement of each university and thus IR activities include collecting data and information and analyzing such data and information. In this definition, IR is recognized as a wider concept. We tried to obtain the current situation regarding what kind of IR activities universities are engaged in and to what degree IR is prevalent in Japanese higher education institutions and then examined the relationship between IR and the university-wide decision-making process through the survey. The details of the survey are shown in Table 10.1.

Figure 10.3 shows both sections and centers across the whole university and committees across the whole university are involved in many IR activities. Sections or centers and committees across the whole university are relatively highly involved in those items such as dealing with accreditation, employment survey, marketing for applicants, dealing with information disclosure, editing college books, and strategic planning. On the other hand, the proportion of whole-university level involvement in those items like the analysis of the characteristics of students in high school, alumni survey, and tuition analysis is relatively low.

Figure 10.4 depicts the degree of activities of IR sections. The highest activity is in the provision of data and analysis for top executives (65.6%) followed by dealing with accreditation (52.6%) and higher education policy analysis (50%). These activities had long been conducted before the IR sections were established in Japanese universities. In this figure, analysis of student evaluation, assessment survey, and GPA analysis are relatively highly conducted. These activities exceed 40% overall. These relatively new activities function to improve teaching and learning and thus are categorized as the IR for teaching and learning. The quality assurance movement and pro-learning outcomes assessment policy in Japan seems to reflect the increase in these IR activities for teaching and learning. On the other hand, activities such as financial analysis and disclosure (9.1%) and tuition analysis (7.8%) remain sluggish.

Figure 10.5 indicates the ratio of installation situation of IR sections: 9.9% of respondent institutions answered that they have a section that is named IR and 15.4%

Table 10.1 Details of the survey

	National	Public	Private	Total
Surveyed institutions	86	83	614	783
Respondents	66	61	425	552
(%)	12	11	77	100

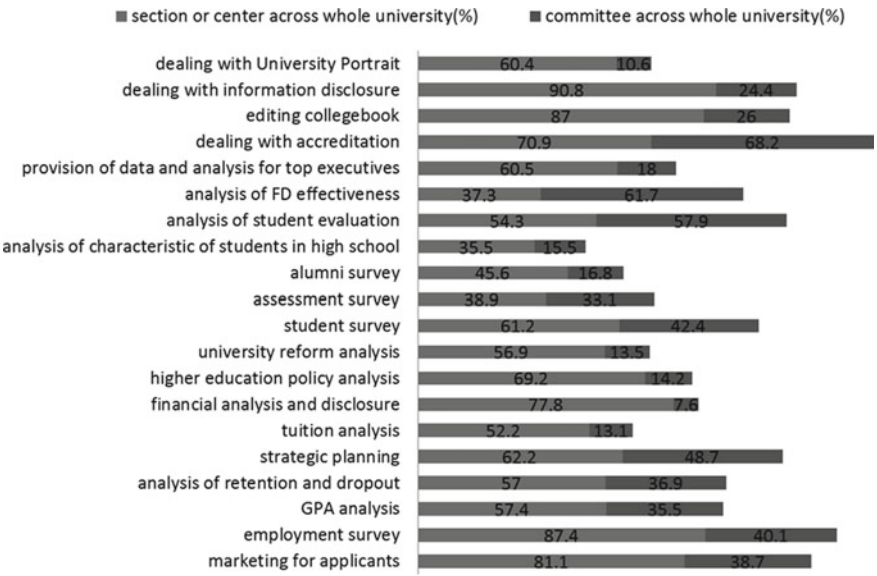


Fig. 10.3 Top 2 sections dealing with IR activities

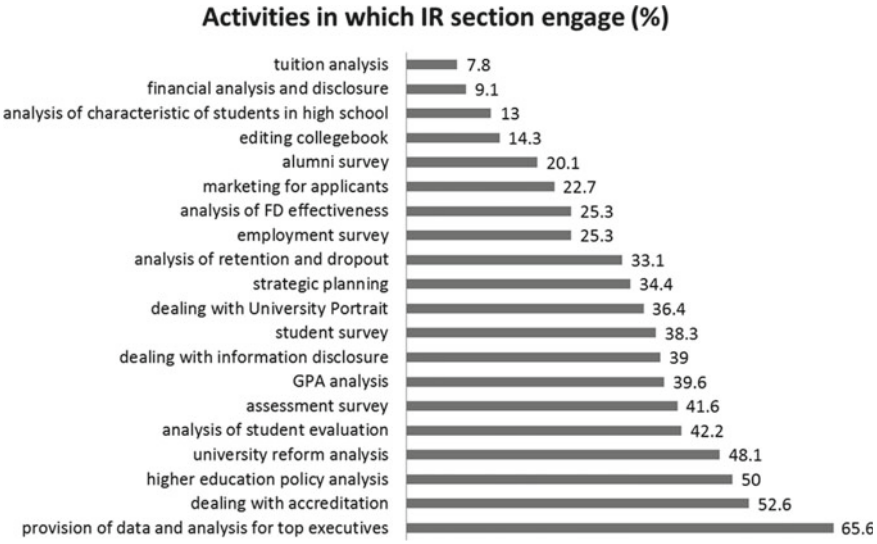


Fig. 10.4 Activities in which IR sections engage

answered that they have similar sections not named IR. The total of these two answers exceeds 25%. On the other hand, 69.1% of institutions answered that they do not have IR sections across the whole-university level. Since it is not easy to grasp to what extent the governance of surveyed institutions is centralized or decentralized, it

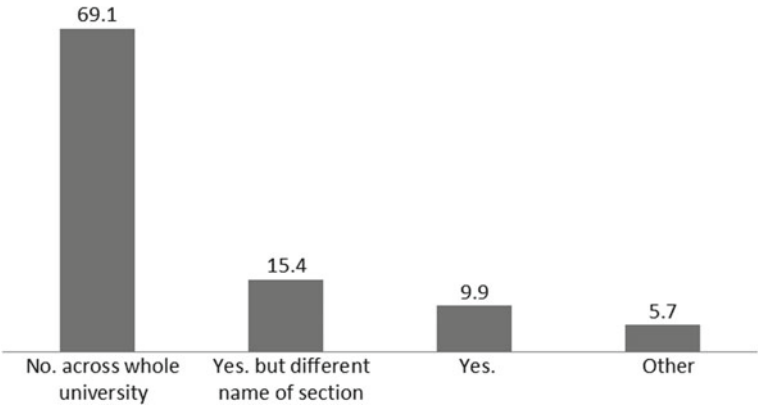


Fig. 10.5 Existence of IR sections in HEI

is assumed that the centralized IR system is not widely accepted in Japanese higher education institutions. Rather, it appears that more decentralized IR systems are prevalent in Japanese higher education institutions.

The average number of staff of IR sections is 3.5 ranging from 1 to 13. Japanese IR sections are relatively small in size.

Forty-seven percent of HEIs which do not have IR sections plan to establish IR sections in the future and 43.4% do not have any plans to do so at this point. However, these respondents indicated that they already have differently named sections which are engaged in traditional IR activities like dealing with accreditation, reporting to executives, and information and higher education policy analysis.

Figure 10.6 shows the reasons for or purposes of establishing IR sections: 66% of institutions indicated that they established IR sections in order to check the effectiveness of educational reforms, 62.2% answered that they established IR sections to deal with accreditation, and 57.1% responded that they established IR sections for university management. These answers are also categorized under the traditional IR role defined by American researchers. The fourth answer was to support students. This response can be categorized under the IR activity for teaching and learning. Thus, again, the recent trend to strengthen quality assurance for teaching and learning is embedded in IR activities of Japanese higher education institutions in order to be accountable and to promote good university management.

Then how do IR people evaluate their activities and contribution for university management? Figure 10.7 shows the results of self-rating of IR people in regard to their activities and contributions. Approximately 60% of IR people who self-evaluate their activities are well recognized inside universities and their activities are involved in the decision-making of university executives and contribute to their decision-making. IR people seem to understand the importance of their activities for university management. In particular, strategic planning has become indispensable for national universities to obtain more funding based on performance after national universities

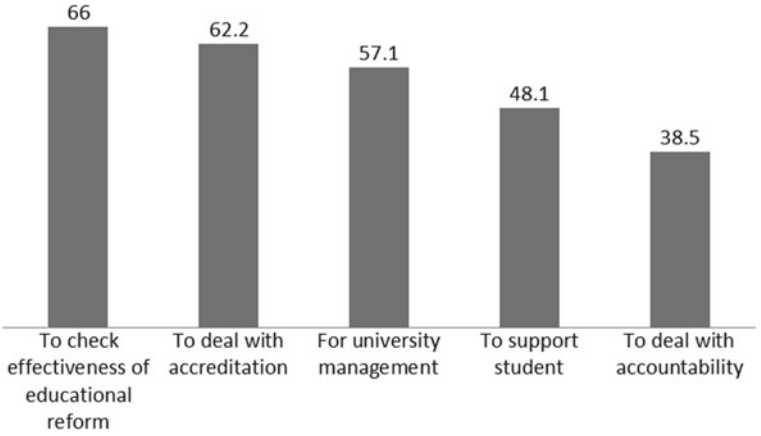
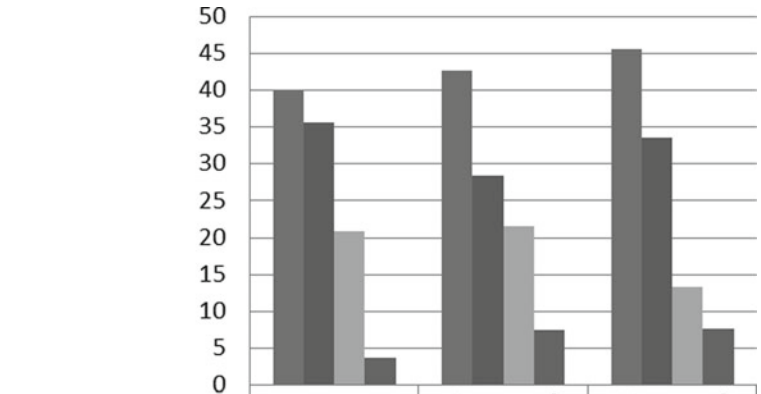


Fig. 10.6 Purposes of establishing an IR section



%	Degree of recognition inside university	Degree of involvment in decision making across university	Degree of contribution for decision making across university
Yes. to some extent	39.9	42.6	45.6
Not so much	35.6	28.4	33.5
Yes. very	20.9	21.6	13.3
Not at all	3.7	7.4	7.6

Fig. 10.7 Self-evaluation of IR people

were corporatized in 2004. Hence, it is presumed that more national universities have proactively established IR sections in order to deal with accountability pressure but

also to make strategic planning effective. The response might reflect such trend of national universities.

The Different Functions of IR Between National Public and Private Universities

Is there any difference in the function of IR between national and private universities? Regarding national universities, 19.7% answered that they have a section named IR and 21.2% answered that they have similar sections not named IR; 9.8% of private universities responded that they have a section named IR and 14.9% answered that they have similar sections. On the other hand, there is no section named IR at public universities. It is evident that national universities have more sections named IR and similar sections than private and public universities have.

While 80% of national universities provide data analysis and information for top executives, 49.2% of public universities and 58.2% of private universities provide data analysis and information for top executives at whole-university level IR sections. More than 90% of national universities deal with accreditation at whole-university level IR sections. On the other hand, 60.7% of public universities and 69.3% of private universities deal with accreditation at whole-university level IR sections.

Considering the role of IR within different institutional types in Japan from the perspectives of accountability and stakeholders, it seems possible to conclude that the role played by IR in Japan tends to differ between national, public and private universities. Those in the national university category tend to prioritize the creation and submission of self-assessment and performance reports from the perspective of accountability, while at the same time being subjected to limitations whereby they are not in a position to make internal information public for research-related purposes. For this reason, it seems that within the process of promoting IR efforts, it is uncertain whether or not the balance between the aspects of IR related to research and implementation has been well achieved.

As for private universities, it seems possible to conclude that in developing IR, they will confront a different set of difficulties than those faced by their national counterparts. Since private institutions have not been subjected to as many requirements for reporting as have national and public universities, deciding how to position such tasks within the institution will not be an easy matter. Rather, as in the case of the United States, private universities may opt to approach the implementation of IR from the perspective of teaching and learning and secure students via enrolment management. All institutions in Japan—whether national, public or private—are also now subject to implementing quality assurance activities with respect to education. It is also feasible, therefore, to envision the enhancement of IR focusing upon student affairs and academic affairs offices.

The findings of the survey indicate that Japanese IR activities are mostly divided into three categories. The first activities are categorized as the IR activities in asso-

ciation with teaching and learning. These IR activities include student surveys for assessing learning outcomes, GPA analysis, analyzing student evaluation and FD effectiveness for example. The other IR category is associated with dealing with accreditation, information disclosure. In the past, this category was developed mostly in national university corporations. This is the special characteristic of the IR development process in Japanese higher education.

However, the findings suggest a new trend. A recent rash of IR section establishment has been urged under external pressure in order to strengthen university governance. Hence, IR sections are expected to function to provide data as well as information and analyze the data and information and then contribute to the decision-making of university executives. In other words, a new notion has emerged that IR is indispensable for university governance. At the same time, IR plays an important role in the quality assurance of teaching and learning. However, in fact, the majority of universities do not establish IR sections at whole-university level and a few IR sections are involved in financial data analysis.

Also, there is a limitation of data accumulation and complicated data analysis. In other words, there are fewer IR professionals in Japanese higher education institutions since the IR movement is so recent that there are not enough opportunities to train and cultivate IR professional people in Japan. One of the serious challenges that Japanese higher education faces is to cultivate IR professionals. However, we do not have a clear plan where and how we cultivate IR professionals.

Discussion and Conclusion

The findings of the recent IR survey indicate the particular development process of IR in Japanese higher education. In comparison with IR development in the US, the Japanese history of IR is very short and limited in terms of research. Thus, Japanese IR has developed very rapidly due to the practical need to cope with external pressure such as accountability and quality assurance movement. At the same time, IR sections are obliged to deal with accreditation and information disclosure required through the University Portrait database which started in 2014. Hence, external stakeholders and higher education policy affect the activities and direction of Japanese IR. In fact, a competitive funding system has been embedded in government policy. For example, establishment of IR sections has become a minimum requirement when higher education institutions apply for competitive grants. Annual evaluation of national university corporations and financial support evaluation of private universities require institutions to establish IR sections.

Although 25% of higher education institutions have already established IR sections, half of them answered that there was no plan to establish one in the near future. While they understand the necessity to establish IR sections, institutions face issues of budget, less professional IR people, and lack capability of IR contribution to university governance. It is still questionable whether or not IR people contribute to university governance from the perspective of effective data analysis

and proposed improvement measures. IR people self-evaluate that their activities such as the provision of data and information contribute to the decision-making of executives. However, there is criticism that IR only accumulates data and provides these data without deep and useful data analysis. Also, checking the effectiveness of teaching and learning through alumni surveys and enrolment management and soundness of university management through financial data analysis is less developed. One of the reasons for these issues is associated with the fact that there are not enough professional IR people and programmes to cultivate IR professionals in Japanese higher education institutions. So, to make IR more effectively contribute to university governance, it is required to have more professional IR people in Japanese higher education institutions. Japanese higher education institutions did not have the "culture of assessment" based upon objective data a few years ago. However, with the rapid expansion of the IR concept, a culture of assessment is potentially being embedded in several aspects and activities of Japanese higher education institutions. It is expected that deeper and high-quality IR activities will continue to develop in Japan. IR is often regarded as function within university. However, in Japan, under the environment of rapid massification and strong governmental control after both the School Education Act and the National University Corporation Law were amended in 2014. The 2014 Amendment is symbolic of this new government control. Simultaneously, national funding policy for higher education requires university to establish IR sections within university in order to deal with accountability and information disclosure. Recent IR establishment is closely associated with the larger issues existing in university environment. Thus, IR movement in Japan may offer special insight to the larger issue.

After showing the results of the IR survey, this paper explores two hypotheses presented by Hawkins and Neubauer in the framework of massification of higher education in Asian countries. JHE policy has shifted toward a learning outcome orientation and the demand for strengthening university governance has resulted in rapid development and attention of Japanese IR as previously described. As a result, each institution is required to strategically plan based on effective data analysis. Strategic planning based on effective data analysis has an impact on the structure of JHE. In particular, there is a possibility of the emergence of stratification in the field of JHE. After the MEXT proposed the necessity to reorganize the fields of Humanities and Social Sciences of national university corporations in June, 2015, 26 national university corporations announced plans to reorganize the fields of Humanities and Social Sciences for the third mid-term goal plan starting from 2016. Effective data analysis shows the preference for the field of science and technology. Innovation in this field leads to increased market value and competitive power in the world market and these fields can cope with the 21st knowledge-based society. Thus, preference is now given to the field of STEM in JHE. There is an emergence of stratification and an elite field as a result of the strong governance of both the government and university leaderships. This may cause inequality between the fields and then inequality of access among students. However, the strong government control of quality assurance has a different impact on the quality of teaching and learning and needs greater transparency. Marginson and Sawir (2005) argue that transparency is a requirement

for the effective exchange of information for consumers or stakeholders of higher education to select "products". Through information disclosure, the quality of teaching and learning of JHE can be improved and high school students can choose higher education institutions which offer good-quality teaching and learning. As a result, learning outcomes might be assured at the time of graduation. This perspective can support the second hypothesis of increased "long-term" equity and equality. Therefore, as a conclusion, I observe that the two hypotheses are expected to proceed simultaneously in JHE.

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