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Chapter 5

Higher Education Development in Taiwan

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<Abstract>

Along with the global trend of higher education expansion, the establishment of market economies has had an impact on Asian HEIs, especially in China, Japan, Korea, and Taiwan, where higher education has experienced tremendous growth in the last decade. The chapter discusses issues of neo-liberalism and university expansion in Taiwan since the late 1980s. This unprecedented growth of higher education not only provides more educational opportunities to the general public, but generates a series of unexpected results. Many universities have undergone governance change for efficiency, increased higher education admission, and oversupply of university graduates. In addition, the increase of social distance between public and private universities, the continuing institutional and disciplinary stratification, and the foreseeable university closure are just a few examples of mass higher education in Taiwan.

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Admission, Neo-liberal Ideology, Free Market Economy, Educational Reform, Higher Education Expansion, Taiwan, Globalization, WTO, University Law. University Governance, Efficiency, Oversupply of University Graduates, Social Distance between Public and Private Universities, Institutional and Disciplinary Stratification, University Closure and Mergers.

5.1 The Impact of Global Neo-liberal Ideology on Higher Education

The adoption of neoliberal, free-market economic policies in the 1980s and the subsequent deregulation of education have had an impact on many systems in Europe, North and South America, and Asia (including New Zealand and Australia) (Olssen, 2002). Many countries in these regions have restructured their systems of public education in an attempt to give HEIs relative autonomy and enable them to assume responsibility as independent institutions. As a result of deregulation and liberalization, individual institutions have become more competitive and accountable through the creation of an overall market mechanism within the education system (Giroux, 2002). [Please check all references to ensure there is a comma after the author name, and before the date] The issuance of educational loans by the International Monetary Fund (IMF) and the World Bank (WB) supports these trends. In general, the IMF and WB serve as a support mechanism for neoliberalism in Latin America, Africa, and Eastern Europe through the promotion of market mechanisms that affect increases in private investment in education and accountability in higher education institutions (Chou, 2003). As governments pursue this ideology, systems of higher education are faced with a series of transformations, shifting from more specific norms of state control to those of state supervision. In brief, policy makers are convinced that HEIs' adoption of market-oriented mechanisms will encourage universities to share the financial burden, especially in light of expanding student enrollments (Chou, 2008a; 2012).

This stance also facilitates the idea that cost-effectiveness among HEIs will eventually increase efficiency and improve educational quality. It is assumed that such a positive impact will enhance institutional academic autonomy, as well as provide more choices for students and parents as empowered consumers of higher education. Along with the global trend of higher education expansion, the establishment of market economies has had an impact on Asian HEIs, especially in China, Japan, Korea, and Taiwan, where higher education has experienced tremendous growth in the last decade (Altbach, 2003). The case of Taiwan serves as an excellent example. Neoliberal principles have influenced higher

education policy since the late 1980s when the country was in the process of political and economic transition.

The concept of globalization and localization represents not only one of the driving policy agendas in Taiwan, but also the origin of higher education reforms over the last two decades. It is also worth noting that Taiwan's higher education system has encountered similar challenges as those in the neighboring countries. [there is something missing here – I cant figure out what you are saying] Many of them have experienced great transformation in higher education owing to this globalization/localization divergence coupled with the impact of neo-liberal principles worldwide since the 1990s (Law, 2004).

5.2 Taiwan's Country Profile

Taiwan is an island located on two straits in East Asia, the Taiwan Strait off the southeastern coast of China, and the Luzon strait, which connects the South China Sea with the Pacific Ocean. The size of Taiwan is about 35,980 square kilometers (13,892 square miles), a size smaller than Switzerland (http://www.nationsencyclopedia.com/ economies/Asia-and-the-Pacific/Taiwan.html#ixzz2r33HHWdV). Two-thirds of Taiwan is mountainous, with some mountains taller than 3,000 meters. The western part of the island is made up of hills that are reduced into plains near the coastal line. Groups of small islands surround the island that predictably receive Taiwanese territory clam (http://eng.taiwan.net.tw/m1.aspx?sNo=0002004; U.S. Library of Congress, 2005). The urbanization rate is around 70 percent (Government Information Office, 2010). Rural areas are considerably less developed than the urban regions, where the people are generally assumed to be more conservative than their urban counterparts (Yi, et al., 2008).

According to Ministry of the Interior, Taiwanese population in 2012 was 23,268,087 which makes Taiwan the 50th largest country in terms of population, and the 16th most densely populated country in the world (http://worldpopulationreview.com/countries/taiwan-population). The current population growth rate is around 0.23 percent

(Government Information Office, 2010). The population is split into four general groups: the Fukienese (people who immigrated to Taiwan from the Fukien province in China before 1949), the Hakka (people who immigrated from Guangdong province in China before 1949), the Mainlanders (people who immigrated from China after 1949), and the indigenous Taiwanese (who include the 14 officially recognized indigenous groups), who make up 2 percent of the population (Government Information Office 2010).

There are also new immigrants who have in the last decade become part of the population through marriage, and each group has its own dialect and cultural perspectives. It is estimated that one in eight primary students are offspring of foreign spouses which adds to the multiculturalism of Taiwan (Yang, et.al., 2012).

Since the 1990s, Taiwan has enjoyed a dynamic capitalist economy with a gradual decrease in government control of investment and foreign trade. Taiwan had a nominal gross domestic product (GDP) of US\$16,442 per capita, which translated into a GDP at Purchasing Power Parity (PPP) of US\$31,834 per capita in 2009 (Government Information Office 2010). That same year, the GDP had a negative growth of 1.9 percent, and the GDP per capita at PPP ranked forty-third in the world (Central Intelligence Agency, 2010). Inflation for 2009 was –0.9 percent, and the unemployment rate as of May 2010 stood at 5.22 percent (Sung, 2010).

While Taiwan has been known internationally as Formosa for centuries, it is officially recognized as the Republic of China, in spite of Taiwan's debated but independent political sovereignty, yet still without full support of an independent nation in the Mainland China. Taiwan is renowned for its breathtaking natural scenery, and its impressive economic development since the 1970s.

After 1949's Chinese civil war, Taiwan became a shelter for the Mainland Chinese who withdrew from communist occupation. Nearly two million Chinese civilians, government officials and military troops relocated from Mainland China to Taiwan. Over the next five decades (1949–2000), the ruling authorities gradually democratized and incorporated the local Taiwanese within the governing structure.[??] Throughout the period, the island prospered and became one of East Asia's economic "Four Little Tigers" and democratic

societies (Morris 1996). Between 2000 and 2008, Taiwan underwent two consecutive peaceful transfers of government power.

As a result of globalization and access to the World Trade Organization (WTO) in 2002, the education system in Taiwan, similar to systems in East Asia, has undergone an enormous transformation. Higher education in particular has been influenced by the trends of globalization, localization, development of information communications technology, as well as a series of political, social, economic, and managerial changes coupled with the advancement of cross-strait relationship with China. These transitions have collectively contributed to multifaceted influences on higher education in Taiwan (Chou and Ching, 2012).

5.3 Historical Development of Higher Education in Taiwan

The development of higher education in Taiwan over the last century represents a transition from the colonial system to the Chinese system. There has been a move from a highly centralized administration to government-regulated and market-driven management since 1987, from restricted access for the elite to a more universal orientation, and from a single-facet standard to a more diverse operation. The impact of foreign influences and local heritage on the current system and the uniqueness of a system that combines Japanese, American, Chinese, and local features indicates the options facing Taiwan in its pursuit of localization and globalization in higher education (MOE, 2006).

After World War II, with the restoration of Taiwan, China gained sovereignty over the island's territory and culture. Many aspects of higher education, such as the academic structure, administrative organization, curriculum and instruction, degree and graduation requirements were reorganized around the model of Chinese universities imported from the mainland. During the 1950s–1960s, foreign aid and investment in Taiwan helped to establish an export- oriented economy and labor-intensive industry on the island. Higher education was greatly impacted and aligned with this change in order to prepare manpower to export labor- intensive products. After the 1960s, Taiwan's higher education system

(particularly junior colleges) developed rapidly, due to the growth of secondary schools and the expansion of labor-intensive industries. As a result, the number of HEIs increased 15-times (from 7 in 1950 to 105 in 1986), while student enrollment increased 52-times (from 6,665 in 1950 to 345,736 in 1986 (MOE, 2006).

Until the 1980s, Taiwan focused on becoming a society that produced capital and technology-intensive goods for export and shifted to the service industry. Taiwan was transformed from a recipient of foreign aid to one that attracted foreign investment. And the country's system of higher education had also reached a stage where many HEIs started to recruit international students instead of sending their own students abroad.

The government regulated higher education so that it could adapt to the new era. In the 1970s, applications to establish private schools were terminated. Since then, technological, vocational education and general higher education have coexisted with each other, later developing into two branches of higher education in Taiwan.

There was a period when the establishment of private HEIs was strictly controlled and banned before the mid-1980s. However, as Taiwan's economy progressed and the political process moved toward democratization in the late 1980s, universities began to promote the pursuit of academic freedom and autonomy that was inspired by their American counterparts.

5.4 Higher Education System in Taiwan

Taiwan's higher education institutes (HEIs) are divided into two tracks: one for academic orientation, and the other for occupational training. Students choose their tracks at the age of 15 years based on their choice of senior high schools. Most HEIs are comprised of four-year colleges, universities, institutes of technology, and two- to five-year junior colleges (MOE, 2012; Lee, 2010).

Programs at HEIs usually last four years except for architecture, law, and dental and medical programs which take longer. Unlike American professional schools which start after college graduation, law and medical schools commence in the first year of university

in Taiwan. More and more universities offer non-declared programs based on general foundation/education for the first two years at college with the purpose of broadening student learning scope and interdisciplinary capacity.

As an export-oriented economy, Taiwan is renowned for its junior colleges, which are vocation oriented, focusing on practical business, technological training, and the applied sciences. However, many colleges have been upgraded to institutes and universities of technology as higher education has expanded over the last fifteen years, although a few, especially nursing schools, still offer junior college programs.

Among these vocational training institutes, a traditional five-year junior college (including former teacher's college) admits junior high school graduates for specialized or semiprofessional training. Another two-year junior college accepts graduates of senior high schools and senior vocational schools to major in programs such as foreign language, hotel management, tourism, business administration, computer science, nursing, agriculture, forestry, fishery, home economics, architecture, civil engineering, and so on. In addition, students are encouraged to seek relevant work experience in order to link their study to the practical job market.

Channels for admission to colleges or universities are based on test scores from entrance examinations, and selection is based on individual applications and recommendations by high schools. The main goal of high school students is to achieve high scores on university entrance examinations in order to attend better universities (Pan and Yu, 1999; Yang, 2000). However, students who have completed junior college programs may transfer to a four-year college or university as freshmen or second-year students after passing the required examinations.

As stated earlier, higher education comprises two tracks of institutes, and there are at least three ways to be admitted to universities and colleges. The first two channels are designed for academic HIEs combining a recommendation and screening process. For example, third-year senior high school students may take the General Scholastic Ability Test (GSAT) in the winter, which assesses their high-school level competence in Chinese, English, mathematics, and the natural and social sciences. Then, students, with their own portfolio

of academic and social achievement, can apply to their priority targeted institution(s) through their competitive school recommendations. The second way is by a college entrance examination and placement. Every July, students who do not succeed in the GSAT can sit for a University Department Required Test (UDRT), which consists of three to five subjects from high school, and they will be assigned to a college based on their test scores.

The third way to gain entrance to the vocational track, namely a college of technology, is to take another entrance exam for a vocational institution in May, which consists of more than half of the senior high graduates. In order to improve the traditional written entrance examination with more diversified entrance schemes, the government set up a Testing Center for Technological and Vocational Education (TCTE) to take charge of the recruitment policy and advancement for technological colleges and universities. Since the 2001 academic year, TCTE, a specialized institution of testing, has taken on a broad range of activities and tasks related to the development of and research on the Technological and Vocational Education (TVE) joint college entrance examination. In the past decade, more than 150,000 examinees took the TVE entrance exam for the vocational track, outnumbering their counterparts for the GSAT (for academic orientation). Nevertheless, the GSAT has always attracted more news coverage and social attention than academic degrees in Taiwan (Chou 2008b).

Higher education programs in Taiwan are usually categorized into the following divisions: the College of Humanities and Sciences, the College of Social Sciences, the College of Medical Sciences, the College of Engineering, and the College of Professional Schools. Most universities and colleges are supervised by the MOE, except for the military academy and the police academy. With respect to curriculum, and taking National Taiwan University (NTU) as an example, there are three streams of courses, including general/ liberal education, departmental required courses, and courses for special professions. General education covers a wide range of required courses such as Chinese literature, foreign languages, physical education, and service learning, while liberal education consists of eight areas: literature and arts, historical thinking, world civilization, philosophy and moral reasoning, civic awareness and social analysis, quantitative analysis and mathematics,

material science, and life science. These courses are designed to encourage a diverse dialogue and integration among different academic fields and ways of thinking, and especially to cultivate students' cultural literacy as the country begins to embrace globalization and localization in a lifelong learning society.

In addition, courses required by department/graduate institutions consist of half of the graduation credits, which normally range from 128 to 148 credits (one credit equals one hour of class per week, and there are eighteen weeks per semester). Students are free to choose elective courses and credits from a campus or through the intercampus system (NTU, 2008a). One exception is that students who have passed the prerequisite test of the teacher education program are then qualified to take courses in the teacher education program, and will become teacher candidates upon completion (NTU, 2008b).

5.5 Higher Education Reform in Taiwan after 1990s

The following section discusses policies and laws in response to issues of globalization since the late 1980s. Governments in Taiwan have responded to the worldwide trend of globalization and neo-liberalism along with the processes of political democratization and economic transformation over the last two decades (Chou, 2008a). Higher education in Taiwan underwent a dramatic transformation after 1987, with the end of the authoritarian regime that had lasted four decades, and the beginning of increased interactions between China and Taiwan. It was a [bring up next sentence]time when many advocates demanded greater social change through abolishing media censorship, granting more freedom to the banking establishment, and producing more competent college students to accommodate Taiwan's emerging high technology industry. The traditional school system also came under fire for being unable to cope with the new social demands in this transitional period. Successive governments, priding themselves on being more responsive to local needs and global challenges than the earlier regime, introduced market-oriented reforms as a way of relieving government budgetary pressures and giving HEIs more autonomy. Consequently, the Educational Reform Committee (1994–1996), led by a Nobel Laureate, was established

to produce five reform papers which in turn served as guidelines for launching a nationwide reform movement in the 1990s (Chou, 2003; MOE, 2010a).

At the same time, the passing of the new revised University Law (1994) and the shift in responsibility for administrative funding from the government to public universities assisted in introducing market dynamics to Taiwan (MOE, 2010b). The University Law further reduced the authority of the Ministry of Education over HEIs in president appointment, tuition fee charging, course requirements, and student recruitment. As a result, university campus operations have become more flexible (Tsai and Shavit, 2003).

5.6 Higher Education Expansion in Taiwan and Related Issues

As successive governments have pursued a neoliberal market ideology due to political liberalism and economic deregulation, higher education in Taiwan has expanded at a much faster pace than expected. There are 148 universities and colleges in Taiwan as of 2012 compared to 51 in 1993, nearly three times of the increase. In 1998, there were only 84 HEIs comprising 410,000 students and 841 graduate institutes, while 142 of 830,000 with 2,215 graduate institutes in 2003 (Cheng and Wu, 2004).

Alongside these changes, there has been a significant increase in master and doctoral education. For example, in the period1996 to 2006, the number of doctoral students increased 2.44 times (Yang, et.al., 2012). Prior to the academic year 2012–2013, undergraduates comprised less than three-quarters of the population (934,000), about 15 percent were master's students (183,000), and the remaining were doctoral students (33,000). The total growth rate was 1.75 times within a decade (MOE 2013). Nowadays, almost one out of 3.7 undergraduates ends up attending graduate school which leads to nearly 60,000 students graduating from master's programs and 4,000 from doctoral programs (MOE, 2013).

Junior colleges have been restructured as universities or technological colleges rather than shut down. The number of students enrolled in universities has increased 2.17 times, twice

as much the student population that has been admitted to universities in the last decade (Chen, 2010).

The expansion of higher education not only provides more educational opportunities to the general public but generates a series of governance changes for efficiency, increased higher education admission, oversupply of university graduates, social distance between public and private universities, institution and disciplinary stratification, and university upcoming closure.

5.7 Governance Change for Efficiency

The expansion of higher education coupled with neo-liberalism's influence has led to some mixed results. Policy makers as well as law makers are convinced that adopting market-oriented mechanisms will encourage universities to share the financial burden of higher education, especially in light of increased student enrollment. This outlook also seeks cost- effective behavior among HEIs, increased efficiency, and eventually better educational quality.

The Government's previous role of initiating rules and regulations for HEIs has now shifted towards specifying funding standards for universities and colleges that then compete based on accountability and performance. Market-oriented higher education is becoming primarily focused on structures and actions tailored to 'competition' and 'deregulation.' In concrete terms, this includes taking steps such as employing performance-based funding schemes, encouraging greater competition for resources, supporting fundraising efforts by universities, establishing more private institutions, deploying external evaluation, and raising tuition fees. Consequently, universities have shifted from traditional norms of state control to those of state supervision (Song, 2005).

5.8 Increased Higher Education Admission

With the unprecedented growth in the number of private universities and technological and vocational institutions that has occurred since 1994, higher education is becoming more

accessible to Taiwan's younger generations aged between 18 and 22 years. The total number of citizens holding a diploma of higher education was 6.68 million in 2008, an increase of 4.24 percent from the previous year (Government Information Office, 2010). Admission rates increased from 49.24% in 1996 to 96.28% in 2006 (Chen, 2010)

In addition, in 2012 Taiwan had almost the highest university admission rate in Asia, with 69.9 out of 100 students aged 18 being admitted to university, which was four times higher than the admission rate in Hong Kong and China (MOE, 2013).

As a result of the expanded number of universities, more students can be admitted to institutions of higher education regardless of their social background, gender, ethnicity, and age. The once elite-oriented HEIs are accessible and responsive to Taiwanese society (Huang and Chen, 2008). The downside of this increased accessibility has been to put greater pressures on universities with budget cuts and resource constraints as the government moves toward a neoliberal ideology. HEIs are now focused on competing for students and resources by generating marketing based on their research 'products' and programs (Chou, 2010). The quality of university teaching is a matter for concern as the declining birthrate forces private universities to compete for student recruits..

Along with this, admission to the university appears to have lost, to some extent, a certain prestige due to the emphasis placed on admissions over selectivity. Currently, admission criteria have been modified to be more suited to students with less academic preparation and motivation because of the recruitment demand. In other words, the drastic expansion of HEIs has threatened the quality of higher education over the last ten years.[sentence doesn't make sense]

5.9 Oversupply of University Graduates

Another issue is the increasing numbers of students who have difficulties in finding a job in their university discipline. A survey indicated that only a quarter of university graduates in the last five years have found a job related to their college major, among which 52.38

percent were arts majors, 50 percent mass communication majors, 48.21 percent medical science and public health majors, 46.43 percent natural sciences majors, and 46.15 percent architecture and urban design majors (Cheng, 2010). The unemployment rate of university graduates increased from 2.7 percent in 1993 to 5.8 percent in 2009, which was much higher than any other educational levels.[not clear what you mean] This situation has placed serious financial burdens on families. The statement, "higher in terms of university degree, higher in terms of unemployment rates" has been disseminated among postsecondary institutions as employment opportunities for college students have decreased (Chou, 2008b).

In 2007, the total number of HEIs was 163, which constituted 1.30 million students, with a 90 percent admission rate. Each year, approximately 300,000 students graduate from universities, among which 130,000 become unemployed. On the other hand, among 91,490 research personnel, 87 percent come from universities and academic institutions rather than being employed in industry or the corporate sphere, which are in need of research and development (R & D) staff. The application of academic research that originates in institutions of higher education comes up short in terms of better serving the needs of companies and industry in Taiwan. Most high technology companies have fewer than 100,000 employees in semiconductor manufacturing, image display, digital life, biotechnology, communications, and the information service industry, but universities will only be able to supply 2,000 in those six key industries in Taiwan over the next six years. A possible solution to this human resource shortage would be to establish a more aggressive higher education policy and strategy that would strengthen the collaboration between the university and the corporate world (Chou and Ching, 2012).

In addition, there is the issue of the increasing numbers of the 'working' population among university graduates in Taiwan. The unemployment rate for these individuals was 4.67 percent in 2009. Those who are part of the working population phenomenon spent at least 27 weeks as part of the labor force during the year, although their incomes were lower than incomes at the official poverty level in the United States in the same year. In Taiwan in 2010, the average monthly income of local workers was NT\$42,141 (US\$1451),

which was the average income in 1998, indicating no improvement in earning power during that period(Wang, 2010).

5.10 Social Distance between Public and Private Universities

The ratio of public to private institutions is 1:1.94 (54:105) in Taiwan (MOE, 2005d). Undergraduate enrollment in public universities and colleges increased 2.67 times, while 5.17 times in private sectors in the last two decades. In this same period the proportion of undergraduates enrolled in private institutions, rose from 62.5% to 73.7%, an increasing discrepancy in expansion between public and private HEIs. This number indicates that the expansion of higher education in Taiwan can be illustrated as increasing private institutions. However, public higher education institutions are viewed as being more prestigious than private ones. Specifically, the expansion was restructured mainly by upgrading existing private ones (Tsai and Shavit, 2003).

Among the universities in Taiwan, tuition of private HEIs is twice as much—as that of their peers at public institutions (Lin, 2005). Research has shown that students admitted to public HEIs tend to come from upper- and middle-class family backgrounds, whereas students from more disadvantaged backgrounds tend to study at private universities. According to a nation-wide survey(Chou, 2008a), the average cost (including tuition fees, room and board for four years) of attending a public university is around NT\$1 million (US\$33,000), and NT\$1.2 million (US\$40,000) for private institutions, of which more than 60 percent comes from family support.

In a research project entitled "Who Are NTU's students?" Luoh (2002) pointed out that 82 percent of NTU students graduated from the 20 top national high schools between 1997–2000. Of these, 57.6 percent grew up in the Taipei metropolitan area, and had an admission rate 16 times higher than those students from the most remote counties on the east coast. In terms of university majors, 42 percent of students in the law schools come from families in which 42 percent of fathers (17 percent higher than average students) and 27 percent of mothers (7 percent higher) have a university degree. These results suggest that there is a

high correlation between admission to a top national university and family background, which includes parent education, family income, residence, and high schools. Nevertheless, students from public universities receive public subsidies totaling as much as NT\$800,000 (US\$27,000) over four years compared with their counterparts in private institutions who pay twice as much of university tuition (Luoh, 2002).

Taiwan adopted a relatively lower tuition fee policy in the 1950s compared with its international competitors, thanks to the belief that education should fulfill a mission as the main avenue for social mobility. However, the policy of providing low university tuition fees has been challenged since the 1960s due to its practice of supporting privileged groups and government employees whose offspring are more likely to be accepted into the highly subsidized public universities (Huang. 1978). Lai and other researchers have justified this doubt and called for a revision of the current discrepancy in tuition between public and private institutions, in order to rectify the issue of reproducing the lines of social class that higher education has created (Lai, 2010).

The expansion of higher education in Taiwan can, therefore, be regarded as a restructuring of private institutions accommodated mainly by creating new institutions and by upgrading existing ones, although other strategies, such as splitting, merging, and increasing the size of the existing institutions, were also used in historical sequences (Tsai, 2010). However, public institutions remain more prestigious than private ones.

5.11 Institutional and Disciplinary Stratification

Higher education in Taiwan is becoming more and more stratified due to the unfair allocation of educational funding, as mentioned above. For example, the overall data on university expenditure per student showed a significant increase between 1999 and 2007, with a decline in average spending declining after that. In this period, most public universities benefited from the increase, especially HEIs such as NTU and some other top universities who received the bulk of their funding from the MOE and donations from the private sector. At the same time, most second-tier public and private HEIs encountered

more and more funding shortages. An increasing trend of stratification among HEIs has led to polarization in terms of educational resources and institutional prestige.

The gap has become wider not only among HEIs but also between disciplines. Data on average spending per student in top public universities reveals that science and technology majors receive twice as much government funding as their peers in the humanities and social sciences, which also accounts for four times more than that for students at private institutions. The gap between institutions and the disciplines continues to widen and accelerate as government funding allocation is increasingly based on accountability and competition. The saying that "the rich get richer, and the poor become poorer" is not uncommon in describing the stratification in Taiwan's system of higher education (Chou and Ching, 2012).

Private universities that lack outstanding qualities and performance not only cannot obtain special grants from the government, they also encounter increasing student recruitment shortages. In 2009, university enrollment overall (and including some regular national universities) faced a shortage of a total of 7,000 students. It is forecast that a number of private universities will be forced to close down in 2016 due to the low birthrate in Taiwan (MOE, 2013). The whole country will also face the immediate impact of a series of university closures and staff / faculty layoffs in academia in the near future if policies such as the reintegration and merger of existing universities, the recruitment of more foreign students, and the relaxing of restrictions on students from mainland China, do not come into effect. A possible solution may be for the government to facilitate private universities in identifying and developing their unique and indispensable attributes.

5.12 University Upcoming Closure

In recent years, Taiwan's society has become more multi-cultural and one with a low birthrate and an aging population. The birthrate has dropped from 410,000 newborn babies in 1981, to 270,000 in 1998, to 167,000 in 2010, which is the lowest level in the last 50 years (Chen, 2010). Many private HEIs (especially in the remote areas) have found

themselves confronted with a serious shortage of student recruits. It is expected that universities will face a series of institutional closures or mergers after 2016 (one-third decline rate), when the declining population is expected to hit 18 (Sun, 2010; Tsai, 2010).

To offset the declining birth rate and increase the numbers of international students, the Ministry of Education set up awards and programs for HEIs to promote internationalization which encourages foreign students, promotes international exchange, and upgrades university international competitiveness. In 2007, the total number of international students (including degree- level students, exchange students, and students studying languages) reached 17,742, which is an increase of 3,263, compared to the total of 14,479 in 2006 (Ko, 2008).

On the other hand, the legislature approved a bill in the Fall of 2010 that admitted China's high school graduates and the top university graduates to Taiwan's HEIs. This policy went through a series of long debates over whether Chinese students should be granted the right to study in Taiwan or not. But in order to ease the shortage of university students and promote communication among the younger generations, the bill was passed and established an annual quota for Chinese students who can be admitted to the island from 2011. The figure will account for less than 1 percent of the total university student population in Taiwan (approximately 2,000) (Chou and Ching, 2012).

It is estimated that almost two-thirds of HEIs in Taiwan are at the risk of closure and mergers in the coming few years (http://vision.udn.com/storypage.jsp?f_ART_ID=1053).

5.13 Conclusion

The inevitable growth of higher education throughout the world has become topic of discussion in the last two decades. This global trend toward establishing market economies has affected many HEIs in Asia and other countries. Taiwan is a good example that has adopted neoliberal principles in its higher education policy since the late 1980s. In examining Taiwan's efforts to globalize its higher educational system while preserving its cultural heritage and local identity, the chapter discusses issues of neo-liberalism and

university expansion since the late 1980s. These have become attempts to respond to the worldwide trend of globalization along with the processes of political democratization and economic transformation over the last two decades. The lifting of martial law in 1987 ending a four-decade authoritarian regime, and the encounter of more Taiwan cross-strait interactions between China and Taiwan has enabled higher education to enter a new era of transformation.

One of the changes was the significant increase in the number of HEIs and student enrollment. Nevertheless, this educational expansion has had mixed results which may provide valuable lessons to those concerned. With the global influence of neo-liberalism, which focuses on privatization and privileges in a market economy, Taiwan HEIs are generally considered to be fee-charging public institutions due to the increased public funding for private universities as a result of the expansion of higher education. On the other hand, starting in the mid-1990s, universities of technology were established through the upgrading or reorganization of institutions, which contributed to the great expansion of both the number of HEIs and the student population. Consequently, the expansion of higher education not only opened up greater educational opportunities for high school graduates, but also created unexpected results, including the changing government role over HIEs, striving for efficiency, increasing higher education entrance, creating more university graduates than needed, the widening social gap between public and private institutes, enhancing stratification among universities, and resulting in university closure and merging challenges.

In the long run, the unexpected declining birth rate has limited the potential development of higher education in Taiwan. Unless a greater international market for student recruitment can be reached in the foreseeable future, the closure and merger of HEIs in Taiwan will be inevitable.

References

- Chen, Dung-sheng (2010). Higher education in Taiwan: The crisis of rapid expansion. Available online at http://www.isa-sociology.org/universities-in-crisis/?p=417
- Chen, G.G. and Wu. Y. M. (2004). The new challenge of the unbalanced development of graduate education in Taiwan. Available online at: http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Taiwan.html#ixzz2r33HHWdV
- Cheng, Yun-Shuan (2010 April 5). Only A Quarter of University Graduates Found Jobs Related to Their Majors. Avaialable online at: http://forum.doctorvoice.org/viewtopic.php?f=24&t=43944.
- Chou, C. P. (2003). The Great Experiment of Taiwanese Education: 1987–2003. Taipei: Psychology Publishing.
- ———. (2008a). "The Impact of Neo-Liberalism on Taiwanese Higher Education." In The Worldwide Transformation of Higher Education, eds., David P. Baker and Alexander W. Wiseman, 9,297-311: Greenwich, CT: JAI Press.
- ———. (2008b). Mr. President: How Are You Going to Deal with Education in Taiwan? Taipei: Psychology.
- ———. (2010). Expectations of Academicians and Academic Sinica 2010. Hong Kong: The China Review News. August 5th. Available online at:http://www.chinareviewnews.com.
- ———. (2012). Who benefits from the massification of Taiwan's higher education?—Editor's preface. *Chinese Education and Society* 45(5/6): 3–7.
- Chou, C. P. and Ching, G. (2012). Taiwan education at the crossroad: When globalization meets localization. VA: Palgrave Macmillan.
- Giroux, Henry A.(2002). Neo-Liberalism, Corporate Culture, and the Promise of Higher Education: The University as a Democratic Public Sphere. *Harvard Educational Review* 72 (4): 424–463.
- Government Information Office (2010). *Mainstream Education* (2010). Taipei: Government Information Office. Available onlie at: http://www.gio.gov.tw.
- Huang, Kung-hui (1978). "An Investigative Analysis of the Family Socio-Economic Background of the Candidates and Passers of University Entrance Examination." *Bulletin Institute of Educational Research Taiwan Normal University* 20: 149-326.
- Huang, Yih-Jyh, and Chun-wei Chen (2008). "Academic Cram Schooling, Academic Performance and Opportunity of Entering Public Universities." *Bulletin Institute of Educational Research* 54 (1): 117–149.
- Ko, Shu-ling (2008). "International Students in Taiwan at an All-time High." *The Taipei Times*, February 12, 2008. Available online at: http://www.taipeitimes.com.
- Lai, T. M. (2010). *It Is Hard to Justify from a Private University Perspective 2010*. Taipei: United Daily News Group. http://mag.udn.com.
- Law, Wing-Wah (2004). "Translating Globalization and Democratization into Local Policy: Educational Reform in Hong Kong and Taiwan." International Review of Education 50 (5-6): 497–524.
- Lee, Lung-Sheng Steven (2010). Technological Literacy Education and Technological and Vocational Education in Taiwan. Paper presented at the Industrial Technology Education for Pakistan 2010, Aichi University of Education, Kariya, Japan. Available online at: http://www2.nuu.edu.tw/~president/share/pdf/20100217.pdf
 Lexington Books.
- Lin, Pi-Jen. (2004). THE Mmathematical Achievement of Fourth Graders of Taiwan in the TIMSS 2003 Field Test. The National Science Council Grant Report. Available online at: http://www.iea.nl/fileadmin/user_upload/IRC/IRC_2004/Papers/IRC2004_Lin.pdf

- Ministry of Education (MOE) (2013). White paper on national cultivation of talents. Available online at http://epaper.edu.tw/news.aspx?news_sn=21968
- ———.(2012). (2012). Summary of statistics: Summary of education at all Levels in SY 2011. Available online at http://english.moe.gov.tw/ct.asp?xItem=12862&ctNode=1184&mp=1
- ———. (2010a). Education in Taiwan 2010–2011. Taipei: MOE.
- ——. (2010b). *University Act 2010*. Taipei: MOE. Available online at: http://www.edu.tw
- ———.(2006). The Excellent Development of University Education. Taipei: MOE. http://english.moe.gov.tw.
- Morris, Paul (1996). Asia's four little tigers: A comparison of the role of education in their development. *Comparative Education*, 32 (1): 95-109.
- National Taiwan University (NTU). (2008a). *Course Finder*. Taipei: NTU. Available online at: https://nol.ntu.edu.tw.
- ——. (2008b). Curriculum Mapping. Taipei: NTU. Available online at: http://coursemap.aca.ntu.edu.tw.
- Olssen, Mark. (2002). "The Restructuring of Tertiary Education in New Zealand: Governmentality, Neoliberalism, Democracy." McGill Journal of Education, 37 (1): 57–88.
- Pan, Hui-Ling, and Chien Yu. 1999. "Educational Reforms with Their Impact on School Effectiveness and School Improvement in Taiwan, R.O.C." School Effectiveness and School Improvement 10 (1): 72–85.
- Song, Mei-Mei. (2005). June 9. "Relationship of Government and High Education within Marketization: Its Implications for the Role and Development of Private Higher Education Institution in China." Paper presented at the Seminar of Transformation in University Management, Tamkang University, Taiwan.
- Sung, Chin-Mei. (2010). "Taiwan Unemployment Rate Fell to 17-Month Low in May 2010." Businessweek, Hong Kong: Times News. Available online at: http://www.businessweek.com.
- Tsai, H.C. (2010). The policy implication of the over-supply and demand in Taiwan's higher education. Bulletin of Humanities and Social Sciences. 11(3):36-41.
- Tsai, S. L. & Shavit, Y. (2003) Higher education in Taiwan: Expansion and inequality of educational opportunity. Paper presented at the International Sociology Association RC28 Research Committee on Social Stratification and Mobility, August 22-24, New York.
- Yang, Shen-Keng. (2000). "Education Reform Facing the New Millenium-Methodological Reflection and International Comparison." Bulletin of Educational Research 44: 1–34.
- Yi, Chin-Chun, Hsiang-Ming Kung, Yu-Hua Chen, and Joujuo Chu. (2008). "The Importance of Social Context in the Formation of the Value of Children for Adolescents: Social Class and Rural Urban Differences in Taiwan." Journal *of Comparative Family Studies* 39 (3): 371–392.
- Yang, Ching-li; Huang, I-chi; Tsai ,Hung-jeng; Wang, Hsiang-ping (2012) Comparisons of fertility rate and birth quality between native and foreign-born women in Taiwan. *Journal of Social Sciences and Philosophy*, 24(1): 83–120.