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Intra-Nationalization of Higher Education: The Hong Kong Case

Abstract This paper explores the internationalization of higher education initiatives of Hong Kong, being one of the Special Administrative Regions (SAR) of China, within the context of the Chinese Mainland-Hong Kong (CM-HK) relations. Historical, social, economic, and political ties between Hong Kong and the Mainland of China, their economic and political interdependency, and a time series analysis of Hong Kong's University Grants Committee (UGC) statistical data (local and non-local participation, geographic composition, and cost analysis of UGC-funded programs) are used to support what the author calls the "intra-nationalization of higher education." This forms a unique internationalization strategy, whereby a sub-national region such as Hong Kong and possibly Macau, orients its internationalization strategy towards a motherland, in this case China.

Keywords Hong Kong, higher education, internationalization, intra-nationalization, regional higher education hub

Introduction

The notion of internationalization of higher education is not only seen as a reaction to forces of globalization and the resulting new academic environment, but also as a result of a nation-region's path dependency directed by its unique history, culture, and their changing place and role within the regional-global political economy. Modernity, decolonization, the post-cold war era, economic globalization and even regionalization have brought about social changes influencing international higher education.

Currently anchored in the knowledge-based economy and discourses of the international higher education market, the internationalization of higher education has expanded from minimum (or no) academic exchange, increased

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(north-south, north-north, and even south-south) cooperation, to an expanded regional-global and transnational academic cooperation (Knight & de Wit, 1995). Cross-border education, student mobility, quality assurance, and the establishment of regional higher education hubs/areas tend to be seen in terms of human capital formation, market development, and regional integration (e.g., the Bologna Process). The motivations, however, range from commercial advantage, knowledge and language acquisition, enhancing curriculum relevancy, to meeting unmet domestic demands for higher education (Altbach & Knight, 2007).

In the case of Hong Kong, recent incidents revolving around identity, residency and resources between the Mainland¹ and Hong Kong citizens (Leung, 2011; Economist, 2012, February 4; Mong, 2012, February 13) suggest ongoing post-1997 the Chinese Mainland-Hong Kong (CM-HK) integration challenges. As such, the author looks at Hong Kong higher education reforms and suggests that a separate imbedded process regarding the CM-HK integration is present in Hong Kong's internationalization of higher education initiatives, a kind of "intra-nationalization of higher education."

The five sections of this paper will start by introducing the paper and the concepts of internationalization. This is followed by a historical presentation of the CM-HK social, economic, and political ties and the presentation of Hong Kong's pre- and post-1997 higher education developments, including its internationalization initiatives. A time series analysis of Hong Kong University Grants Committee's (UGC) statistical data, including local and non-local participation, geographic composition, and a cost analysis of the UGC-funded programs is conducted, presented, and is followed by this paper's conclusion.

Internationalization and Regionalization of Higher Education

Globalization and internationalization of higher education are two different but related concepts. Altbach and Knight (2007) and De Wit (2010) point this out by referring to globalization of higher education in terms of economic and academic trends, and the internationalization of higher education as a reaction to the former. For a formal definition of the internationalization of higher education, this paper takes Knight's (2008) definition of it as "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education" (p. 21). Further, De Wit (as cited in De Wit, 2010, p. 9) and Knight (2008, pp. 22–24) identified political, economic, social and cultural, and academic rationales as the four broad reasons for internationalizing higher education both at home and abroad.

¹ The Mainland in this paper refers to the Mainland of China.

Similarly, regionalisms and regionalization of higher education are states' reaction to globalization in a global environment characterized by the erosion of the nation state system, and the increasing inter-dependency of nation states. Regionalisms are increasingly understood "as the outcome of integration processes involving a coalition of social forces: i. markets, private trade, and investment flows; ii. policies and decisions of companies or organizations; and iii. state-led initiatives" (Hurrell as cited in Robertson, 2008, p. 720) shedding their traditional geographic boundaries and nation state focus. They have also facilitated the structural transformation of the world order into a multi-polar structure (Hettne & Söderbaum, 2000), a world of regions (e.g., Africa, Asia, East Asia, Europe, North America, Oceania).

Regionalization of higher education, on the other hand, should be seen as a communal internationalization initiative among regional stakeholders within regionalisms made possible in a world of regions. In fact, Knight (2011, May) defined regionalization of higher education as "a process of facilitating closer collaboration and alignment among higher education actors within a designated area or framework." Increased student and academic mobility, cross-border collaboration and knowledge exchange within the region framed within a quality assurance framework facilitates increased regional integration, economic competitiveness and influence in the global higher education market and space. Comparing European and Asia Pacific regionalization of higher education initiatives, Chao (2011) showed how the Bologna Process has facilitated European integration (e.g., participation by its periphery, regional quality assurance frameworks, and recognition of higher education qualifications), and that its influence has crossed beyond its regional boundaries (e.g., Asia Pacific).

Taking the CM-HK relations as a regional framework and looking at Hong Kong's higher education reforms from an internationalization framework, this paper uses the above concepts as an analytical lens to understand, and argue for the existence of intra-nationalization of higher education in Hong Kong.

A Brief History of the CH-MK Ties

The CH-MK ties should be seen from a historical perspective taking into consideration social, economic, and political ties. Hong Kong was originally part of southern China, sharing a history, culture, economy, and political system with the Mainland. Sino-British conflict resulted in Hong Kong Island becoming part of the British Empire in 1842, followed by the Kowloon peninsula and the New Territories in 1860 and 1898 respectively. In spite of this, the fact remains that Hong Kong residents' history and culture are deeply rooted in the Mainland. A large majority of its population can trace their ancestry to southern China and/or

other parts of the Mainland and this has been further enhanced by the migration of Shanghai capitalists and Cantonese workers to Hong Kong since 1949.

In the 1950s, Hong Kong successfully shifted from China-reliant international trade to light manufacturing following the Korean War and United Nations' trade embargo on the Mainland. In the 1970s, Hong Kong manufacturing suffered a deteriorating competitive advantage with its increasingly expensive labor force, and took advantage of the Mainland's 1978 open door policy to start offshoring its manufacturing sector to the Mainland. This trend continued and even increased after the 1984 joint agreement by the British and the Mainland governments to revert Hong Kong's sovereignty to China in 1997. The CH-MK economic integration increased, and Hong Kong focused on service-based industries to become a service center for the Mainland by the late 1980s (Ho & So, 1997, p. 255).

Currently, the Mainland accounts for 49% of Hong Kong's total trading value, making it Hong Kong's largest trading partner (Hong Kong Government, 2010, pp. 50–53). Furthermore, the CH-MK Closer Economic Partnership Arrangement (CEPA) and Hong Kong's joint development initiative in the Pearl River Delta region (Trade and Industry Department. The Government of the Hong Kong Special Administrative Region, 2003; Greater Pearl River Delta Business Council, 2006) should facilitate further economic integration in years to come. Hong Kong's service sector has grown and its share of GDP rose from 84.4% in 1996 to 92.6% in 2009 (Hong Kong Government, 2010). As of 2010, Hong Kong's four key industries (financial services; tourism; trading and logistics; and professional services and other producer services) contributed 48.2% (HK\$988,400 million) of GDP and 48.3% (1,690,200) of total employment (Census and Statistics Department. The Government of the Hong Kong Special Administrative Region, 2012). Hong Kong is considered a global center for world trade, finance, business, and telecommunications, and considered to be the world's 10th largest trading entity (Hong Kong Government, 2010, pp. 44–46).

The role of Hong Kong's "strong kinship," "economic," and "community ties" with China's southern province, Guangdong, were hinted at and mapped by Ho & So (1997, pp. 249–255) not only in the context of the peaceful transition back to China in 1997, but also its continuing economic integration with the Mainland and its shift to a service oriented economy. In fact, Hong Kong business elites, who were heavily invested in the Mainland by the late 1980s, played a major role in brokering Hong Kong's SAR current status under the "one country two systems" policy.

Hong Kong has strong social, economic, and political ties with the Mainland from a historical, current, and future perspective. Its 155 year British colonial legacy (1842–1997), however, exposed Hong Kong residents to Western ideologies, culture and practices, markedly different from those of the Mainland.

As such, integration challenges should be expected and have been manifested in the CH-MK incidents related to identity, residency, and resources mentioned earlier in this paper's introduction.

Hong Kong Higher Education Developments

In spite of the one country two systems approach, Hong Kong, with its society and policies (including higher education) has been affected by the CH-MK economic integration (since the late 1970s), the Mainland's economic and political rise (from the late 1980s), and the city state's reverted sovereignty (since July 1997) in favor of the Mainland.

Hong Kong's historical and current role as the world's gateway to China (and vice versa) and its British colonial legacy grant it the advantage of being an international city with an internationally recognized higher education sector, and an economy that rides on the Mainland's economic and political rise in the international arena. On the other hand, in spite of its common Chinese cultural heritage, Hong Kong's long exposure to Western ideologies and culture provides distinct integration challenges to its motherland.

Hong Kong's policies, including those for higher education, have been anchored in its "big market small government" concept, which embraces the idea of market competition with minimal government intervention. Fok (2007) and the University Grants Committee (2010, pp. 24–27) confirmed Hong Kong's strong competitive culture and its need for international recognition. The former, however, also highlighted government and business sector manipulation to maintain dominance and power. Internationalizing its staff, students, and curriculum, building an international network, increasing its international rankings, and entering the Mainland higher education market through collaboration with its local universities are done in the spirit of competition, survival of the fittest, and the advantage of the city state's dominant elites.

This section presents pre- and post-1997 Hong Kong higher education policies and reforms in an effort to understand the city state's policy directions, and the rationale behind such change, primarily those related to the CM-HK relations.

Pre-1997 Higher Education Reforms

Pre-1997 Hong Kong higher education reforms focused on the initial expansion of higher education based on the needs of its manufacturing sector in the late 1970s and early 1980s, its shift to a service-based economy, and the realization that Hong Kong's future would be in the hands of the Mainland since 1997. Chung (1991) and Cheng (1995), tracing pre-1997 higher education

developments, highlight the expanding primary and secondary education, and economic and political reasons as the factors leading to the expansion of the higher education sector. They also raise concerns, however, about maintaining quality amidst an expanding higher education sector, and issues related to Hong Kong's return to China.

Hong Kong's focus on expanding and providing universal primary and secondary education in the 1960s and 1970s increased the population of secondary school graduates and fueled an increasing demand for higher education. This demand was fueled by the special place education has within a Confucian heritage community such as Hong Kong, the city state's growing prosperity, and the low participation rate (1% to 2%) in higher education in the mid-1970s.

Given the above situation and the shortage of skilled and educated labor in the territory, the Government Secretariat (1981) presented the need to expand and increase the higher education sector. This was followed by the establishment of polytechnic and post-secondary colleges (e.g., City University of Hong Kong, Hong Kong Polytechnic University, Hong Kong Baptist University, and Lingnan University) in the mid-1980s, and their conversion to university status in the 1990s. During this period, Hong Kong seemed to mirror British higher education developments during the 1980s and 1990s.

From the mid-1980s onwards, however, with Hong Kong offshoring manufacturing to Southern China, its shift to a service-based economy, and the increasing demographic problem brought about by a low fertility rate and increasing outward migration as a result of Hong Kong's imminent return to the Mainland in 1997 its manpower needs changed. The need for a better educated labor force was increasingly evident.

As a result of these demands, in 1989, Hong Kong's governor proposed an increase in first-year first-degree (FYFD) places from 7,000 in 1990 to 15,000 (later revised to 14,500 based on the 1991 census) in 1995 to enable 18% and 6% of the 17 to 20 age cohort to attend local degree and sub-degree courses respectively (Chung, 1991; University Grants Committee, 1993, 1996; Cheng, 1995; OECD, 2011, pp. 98–104).

Post-1997 Higher Education Reforms

Post-1997 Hong Kong higher education reforms focused on making the city state into a regional education hub, restructuring its higher education academic structure (to a 3-3-4 system), improving the CM-HK higher education integration, and its capacity to serve the city state's education needs. These are on top of the ongoing focus on expanding local and non-local higher education provision, and an increasing focus on research and development.

As early as 2002, Hong Kong higher education pursued reforms in governance, funding, quality, and increasing private sector participation following global higher education trends of the early 2000s. University Grants Committee (UGC)² funded higher education institutions (HEIs) were granted self-regulatory authority over their continuing and professional education arms, and their salaries were delinked from civil service standards to improve hiring competitiveness. The UGC also started using a performance-based funding component, and implemented a Credit Accumulation and Transfer System (CATS) to make Hong Kong higher education more integrated and efficient, facilitating continued participation in higher education by sub-degree holders, and adult learners.

In terms of private sector participation, matching schemes (where the government matches private sector donations to UGC-funded HEIs) and the gradual phase out of public financing for sub-degree and taught post-graduate programs encouraged private sector funding, participation, and provision in higher education, while shifting the burden of financing to individual learners. Furthermore, in 2005 a straight 4% limit³ for non-local undergraduate and taught post-graduate students was implemented, while the quotas for non-local research students were completely removed (University Grants Committee, 2004).

Regional Education Hub

The above mentioned reforms form part of Hong Kong's drive to be a regional education hub, which was initially advanced by the UGC's (2002) higher education report, and later used by Hong Kong's former chief executive's 2004 policy address promoting the city state as a "world city" (Chief Executive of Hong Kong, 2004). Hong Kong's core strengths of having "internationalized higher education" and "strong links with the Mainland" are being highlighted in its quest to become a regional education hub (Universal Grants Committee, 2004; Cheong et al., 2009, pp. 59–61). In 2010, the UGC stressed that Hong Kong was an integral part of the Mainland, recognized the need and benefits of further integration, and the need for Hong Kong students to engage with and know more about the Mainland, and explicitly mentioned the city state's competitive

² The UGC is a non-statutory advisory body tasked to advise on the development and funding of higher education, administer public grants, monitor quality, and promote research to the eight UGC-funded HEIs.

³ Previously there was a separate 2% upper limit each for non-local undergraduate and taught post graduate students. Furthermore, the 4% straight limit is part of the 10% non-local students limit for sub-degree (SD), undergraduate (UG) and taught postgraduate (TPG) programs, which was later increased to 20% per Hong Kong's Chief Executive November 2007 policy address.

advantage in being a global center for China-related studies (University Grants Committee, 2010, pp. 69–75).

Rationales for the regional education hub directive are seen in Hong Kong's need to: i. sustain its economic growth (commercial purposes); ii. recruit skilled and competent manpower (demographic challenges); and iii. integrate with the Mainland (identity formation).

The sustainability of Hong Kong's economic growth depends on its ability to have a steady supply of skilled, competent, and educated (domestic and foreign) workers, its continuing ability to attract foreign investments and nurture entrepreneurs, and benefit from its (social, economic, and political) ties with the world's 2nd largest economy, the Mainland. Hong Kong, therefore, needs to absorb domestic higher education demand, attract foreign students and employees, and offer a favorable environment for students, employees, and foreign enterprises. The concept of Hong Kong becoming a regional education hub is not simply about the higher education industry, but its ability to help sustain the city state's economic growth. In fact, Cheong et al. (2009, pp. 25–26) noted Hong Kong's lack of outbound higher education provisions outside of the Mainland and Taiwan of China, and stressed that the city state's purpose for exporting higher education is to attract talented students and create an internationalized environment in Hong Kong campuses.

Hong Kong's post-1997 immigration schemes involving the Mainland (see Table 1) show a preference for this group and its student sub-group. The Admission of Talent Scheme (ATS) established in 1999 allows the Mainland research post-graduate students to remain and work in the city state. In 2001, this focus was expanded to include degree level the Mainland Chinese students graduating from Hong Kong institutions (see EDMS in Table 1). In 2008, it further expanded to include all non-local students in its immigration arrangements.

Furthermore, integration challenges related to ideology, culture, and customs should be expected with Hong Kong's sovereignty returned to China. Since the Mainland's 1978 open door policy, however, academic exchange and collaboration, economic integration, and political dynamics between local Hong Kong elites and Beijing have facilitated a growing awareness of key integration issues, resulting in the negotiation of a peaceful handover in 1997, and leading to Hong Kong's SAR status under the one country two systems integration policy. Given ideological, cultural, and social differences between Hong Kong and the Mainland, integration challenges will persist, until at least two generations after the 1997 handover and until the "Hong Kong 2047 question"⁴ has reached resolution.

⁴ Hong Kong's SAR status has been fixed at 50 years and as such will expire in July 2047.

Table 1 Post-1997 Mainland-Related Employment Immigration Schemes

Date	Scheme	Target/Remarks
December 1999	Admission of Talent Scheme (ATS)	The Mainland Chinese in China and those living abroad over a year. The Mainland Chinese research post-graduate students graduating in Hong Kong Universities
June 2001	Admission of the Mainland Professionals Scheme (AMPS)	Sector specific (IT and Financial Services)
August 2001	Employment of Degree or above level Mainland Students graduating from educational institutions in Hong Kong (EDMS)	Only for degree awarding higher education institutions
July 2003	Admission Scheme for the Mainland Talents and Professionals	Replaced ATS and AMPS
May 2008	Immigration Arrangements for Non-Local Graduates (IANLG)	Replaced EDMS

Source: Compiled by the author from www.immd.gov.hk/ehhtml/home.htm

Given this situation, it is reasonable to assume that Hong Kong's regional education hub agenda would include identity formation and issues related to further integration with the Mainland. In fact, Hong Kong is primarily targeting the Mainland students, prior to other Asian students and students from the rest of the world (in that specific order) to fill in places for non-local students within Hong Kong's higher education sector (University Grants Committee, 2004, pp. 1–5; EMB as cited in Cheong et al., 2009, pp. 2–3).

Hong Kong's internationalization efforts have so far (until recently) been focused on internationalizing the curriculum, increasing international collaboration, and attracting foreign students to study, remain and work in the city state. This includes the implementation of the New Academic System (3-3-4 system), incorporating general education courses in undergraduate education, offering registered and exempted non-local courses and programs, a focus on research, and increasing non-local student participation in Hong Kong higher education. Its outbound internationalization efforts (e.g., offering Hong Kong programs, setting up branch campuses and research centers in other countries) have so far been limited to the whole China (the Mainland, Taiwan, and Macau; Cheong et al., 2009; University Grants Committee, 2010, pp. 62–62, 69–72).

New Academic System (3-3-4 system)

In 2009, Hong Kong initiated a new academic “3-3-4 system,” shifting its education system from a seven-year secondary and three-year undergraduate

system to a six-year (three years each for junior and senior) secondary education and a four-year undergraduate system, with full implementation in September 2012. Incorporating a more liberal education, democratizing access to higher education, and international realignment of its curriculum and structure with the USA and the Mainland (four-year bachelor degrees) were the rationales behind these structural changes (Education Bureau. Curriculum Development Institute, 2010).

The 3-3-4 structural change in 2009, was preceded by Hong Kong's directive to be a regional education hub in 2002 and the 2004 memorandum between the Mainland and Hong Kong regarding mutual recognition of degrees (Education Bureau, 2004). Furthermore, the Bologna process in 1999 has actively harmonized higher education systems in Europe and beyond to follow three cycles: three year bachelor's, two year master's, and three year doctorate degrees. Hong Kong's new academic system thus suggests that rather than internationalization, it is the city state's interest in realigning its higher education with that of the Mainland that governs the current direction. These interests would be commercial (attracting the Mainland students), economic (furthering economic integration), political (appeasing Beijing), and/or social (integration) purposes.

The CM-HK Higher Education Cooperation

Aside from the 2004 memorandum between the Mainland and Hong Kong recognizing each other's higher education degrees, Hong Kong HEIs have been collaborating with their Mainland counterparts in terms of establishing research institutes/state key laboratories and colleges, but also in delivering Hong Kong higher education programs in the Mainland.

In terms of Hong Kong-Shenzhen higher education cooperation, Chinese University of Hong Kong, City University of Hong Kong and Hong Kong University have established research institutes in Shenzhen (see Appendix 1). Chinese University of Hong Kong and Shenzhen University signed a collaborative agreement in July 2011 to establish the Chinese University of Hong Kong's Shenzhen campus designed for 11,000 students, while Hong Kong University has plans to open a 2,000 bed teaching hospital in Shenzhen in 2012 (Chinese University of Hong Kong, 2011; Gooch, 2011, December 25).

In 2005, Beijing Normal University and Hong Kong Baptist University jointly established the United International College (UIC) in Zhejiang province. Further, 12 state key laboratories have been established in Hong Kong HEIs since 2005 (see Appendix 2). As of April 2012, there are 31 CM-HK higher education collaborations recognized by the central government (see Appendix 3). These

include four undergraduate programs (including UIC mentioned above), 26 masters' programs and one doctorate program.

Recent development in the CH-MK higher education cooperation includes improving Hong Kong students' access to the Mainland higher education. In 2012, 63 Mainland HEIs will pilot the use of the Hong Kong Diploma of Secondary Education Examination (HKDSE) and the Hong Kong Advanced Level Examination (HKALE) to assess Hong Kong students' admission to their programs in lieu of the Joint Entrance Examinations for Universities in the Mainland (Education Bureau, 2011, November 28).

The CM-HK higher education cooperation is deepening, and it not only facilitates promoting and offering Hong Kong higher education programs in the Mainland and increasing access for Hong Kong students to the Mainland higher education, but also attracts the Mainland students, academics and talents to Hong Kong. Not only has Hong Kong managed to increase higher education provision through its neighboring provinces and access to the Mainland higher education, but it has also accessed the Mainland talents and research funds through its Shenzhen research institutes and the key state laboratories located in various Hong Kong HEIs.

Higher Education Provision, Participation, and Outward Student Mobility

A decade after the UGC presented the idea of a regional education hub, there has been an expansion of degree-awarding HEIs⁵ from 11 in 2002 to 17 in 2012, while providers of locally-accredited sub-degree (including those provided by degree-awarding HEIs) programs increased from 19 in 2002 to 24 in 2012 (Education Bureau, 2012a; Hong Kong Government, 2007). Furthermore, the current 1,136 non-local (412 registered and 724 exempted) courses⁶ offered through various providers have also helped absorb domestic higher education demand and reach the Hong Kong government's target of having 60% of the 17 to 20 age cohort in post-secondary education (Education Bureau, 2012b).

As of 2010 to 2011, there were 14,800 FYFD places in UGC-funded HEIs and

⁵ Composed of eight UGC-funded HEIs (Hong Kong University, Chinese University of Hong Kong, Hong Kong University of Science and Technology, City University of Hong Kong, Hong Kong Polytechnic University, Hong Kong Baptist University, Lingnan University, and the Hong Kong Institute of Education), two public-funded HEIs (Hong Kong Academy of Performing Arts, Open University of Hong Kong), and five private HEIs (Hong Kong Shue Yan University, Chu Hai College of Higher Education, Tung Wah College, Caritas Institute of Higher Education, and Hang Seng Management College).

⁶ Non-local courses offered by local providers are required to be registered unless they are collaborating with the degree-awarding HEIs. Then they are considered exempted non-local courses under the Non-local Higher and Professional Education (Regulation) Ordinance effective 1997.

the Hong Kong Academy of Performing Arts, 3,500 places in self-financing degree programs, and 2,000 senior year undergraduate places, and 3,000 top-up degree places for sub-degree programs and students. The 26,700 self-financing and 8,700 publicly-funded sub-degree places also increased the post-secondary participation rate from 30% in 2000 to more than 60% in 2010–2011, with 27% of the age cohort in local degree-level education (Education Bureau, 2012c).

Hong Kong's outbound student mobility figures (see Table 2), however, show that a significant number of Hong Kong students (32,725 as of 2009) study abroad. Furthermore, a declining outward mobility ratio (% of higher education student age cohort studying abroad) since 2003 and a steady 7% gross outbound enrollment ratio (% of the total Hong Kong students enrolled outside the country) suggest a contraction in higher education places in the city state. As of 2009, the top five host countries for outbound Hong Kong students (degree level and above) are Australia, UK, USA, Canada, and China (including Macao SAR) respectively (UNESCO Institute for Statistics, 2009).

Table 2 Hong Kong Outbound Students Mobility (Undergraduate and above)

Hong Kong	1998	2000	2003	2004	2005	2007	2008	2009
Outbound mobile student	31,870	25,345	34,844	33,803	33,953	33,195	33,677	32,725
Outbound Mobility Ratio (OMR) (%)	n. a.	n. a.	24	23	22	17	13	12
Gross Outbound Enrollment Ratio (GOER) (%)	7	6	7	7	7	7	7	7

Source: Compiled by the author from www.uis.unesco.org/education/Pages/default.aspx

Note. n.a.= not available.

The time series analysis of UGC statistics in the next section will further enhance this observation and provide a better picture of Hong Kong's higher education.

Time Series Analysis of UGC Statistical Data

The previous two sections presented Hong Kong's historical and current ties with the Mainland and point to the fact that Hong Kong's pre- and post-1997 higher education developments are influenced by economic, social, and political changes in the city state. Furthermore, it presented Hong Kong's higher education reforms, focusing on global higher education trends: access, equity, funding, governance, privatization, quality assurance, relevance, and shifting the financing burden to individual learners.

This section, however, will not focus on Hong Kong's higher education

reforms, but rather on the results of the time series analysis conducted by the author using UGC statistical data from 1995 to 2010. Local and non-local participation, their geographic origins, and the unit costs of various UGC-funded programs are studied to extract long term higher education trends, confirm implementation of higher education policies, and support the author's argument of a process termed the intra-nationalization of higher education, in Hong Kong higher education.

Increasing Participation in Higher Education?

As of 2010 to 2011, more than 60% of Hong Kong's 17 to 20 year old residents have access to higher education either in UGC-funded programs, local degree and sub-degree programs, non-local courses and degrees and/or studies overseas. Participation rates in UGC-funded programs have increased from 3% to 18% from the early 1980s to the mid-1990s.

UGC-figures (see Fig. 1), however, show a 1.2% drop in total student participation in UGC-funded programs from 75,557 students in 1995 to 74,651 students in 2010. In fact, student participation since 2005 has actually dropped below the 1995 figures. Although undergraduate student (UG) participation has increased between 1995 and 2010, it has been neutralized by minimal growth in research postgraduate (RPG) and the decreasing trend of sub-degree (SD) and taught postgraduate students (TPG). Furthermore, there is a changing composition of UGC-funded programs (see Fig. 2) from 19.70% (SD), 62.80% (UG), 13.25% (TPG) and 4.25% (RPG) in 1995 to 9.35% (SD), 77.11% (UG), 4.79% (TPG), and 8.74% (RPG) in 2010. During the period covered

Fig. 1 Total Students in UGC-Funded Programs (head count)

Source: Compiled by author from UGC statistics (www.ugc.edu.hk)

Fig. 2 Composition of Total Students in UGC-Funded Programs (% of total head count)
Source: Compiled by author from UGC statistics (www.ugc.edu.hk)

(1995–2010), RPG and UG components of total UGC-funded programs have increased 105.65% and 22.78% respectively, showing Hong Kong’s focus on research and increasing its supply of skilled and educated manpower.

Non-Local Students and the Mainland Student Dominance

In spite of the slight decrease in higher education participation, non-local student participation in UGC-funded programs grew significantly by 716%, from 1,239 to 10,106 students in the period from 1995 to 2010. Non-local students in UGC-funded programs (see Fig. 3) have significantly increased from 1,239 (1.64%) to 10,106 (13.54%) students (% of total) in 1995 and 2010 respectively.

Fig. 3 Total vs. Non-local Students in UGC-Funded Programs
Source: Compiled by author from UGC statistics (www.ugc.edu.hk)

Furthermore during this same period, the Mainland students in UGC-funded programs increased significantly by 1,007% from 791 to 8,756 students, representing 1.05% and 11.73% of total UGC-funded students in 1995 and 2010 respectively.

A closer look at non-local student composition data (see Fig. 4) reveals a predominant and increasing the Mainland composition from 63.84% (791) to 86.64% (8,756) in 1995 and 2010 respectively, peaking at 92.57% (6,751) in 2007. On the other hand, Asian and the Rest of the World (ROW) student composition percentages of the whole have fallen from 13.64% (169) and 22.44% (278) in 1995 to 9.4% (950) and 3.96% (400) in 2010.

Fig. 4 Composition of Non-Local Students in 1995 and 2010 in UGC-Funded Programs (head count)

Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

Increasing Non-Local UG and RPG Students

There are an increasing number of non-local students enrolled in UGC-funded UG and RPG programs. In 2010, there were 5,598 and 4,438 non-local UG and RPG students in UGC-funded programs, significantly higher than the 87 and 1,005 non-local UG and RPG students in 1995 (see Fig. 5). Growth in the number of non-local UG students, however, far exceeded the growth of non-local RPG students resulting in their changing composition in relation to the total

Fig. 5 Composition of Non-Local Students in UGC-Funded Programs (head count)

Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

number of non-local students. Non-local UG and RPG students' composition of non-local students (see Fig. 6) changed 7.02% and 81.11% in 1995 to 55.39% and 43.91% in 2010 respectively, while its composition in relation to total UGC-funded UG and RPG programs (see Fig. 7) grew from 0.18% and 31.28% in 1995 to 9.72% and 68.02% in 2010 respectively. These facts point to Hong Kong's increased efforts to attract non-local students, and eventually retain them as part of its needed skilled and educated workforce.

Fig. 6 Composition of Non-Local Students in UGC-Funded Programs (head count)
Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

Fig. 7 Percentage of Non-Local Students Vs Total Same Degree Students in UGC-Funded Programs
Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

The Mainland Dominance in Non-Local UG and RPG Programs

Furthermore, the Mainland student dominance is evident in non-local UGC-funded UG and RPG programs. The Mainland students' share of total UGC-funded UG and RPG programs (see Fig. 8, Fig. 9) has increased from

0.01% (5) and 23.93% (769) in 1995 to 8.06% (4,638) and 62.42% (4,073) in 2010 respectively. Non-local SD and TPG students, on the other hand, have roughly retained the same composition during the period from 1995 to 2010.

Fig. 8 Composition of Non-Local UG Students in UGC-Funded Programs (head count)
Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

Fig. 9 Composition of Non-Local RPG Students in UGC-Funded Programs (head count)
Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

Furthermore, the Mainland UG and RPG students accounted (see Fig. 8, Fig. 9) for 5.75% (5 of 87) and 76.52% (768 of 1,005) in 1995 and 82.85% (4,638 of 5,598) and 91.78% (4,073 of 4,438) in 2010 of total non-local UG and RPG students respectively. In fact, non-local UG composition (see Table 3) has significantly changed from 5.75%, 27.59% and 66.67% for the Mainland, Asian and ROW UG students in 1995 to 82.85%, 12.88%, and 4.27% in 2010 respectively. Non-local RPG composition (see Table 3) has also changed from 76.52%, 9.95% and 13.53% in 1995 to 91.78%, 4.87% and 3.36% in 2010 respectively, showing the same trend of increasing the Mainland student

participation and decreasing participation among Asian and especially students from the rest of the world.

Table 3 Geographical Composition of Non-Local Students (% of total non-local UG/RPG)

UG	1995	1997	2000	2002	2004	2006	2007	2008	2009	2010
The Mainland	5.75%	37.11%	91.99%	93.64%	93.18%	92.94%	91.93%	90.77%	87.88%	82.85%
Asia	27.59%	21.65%	3.31%	3.11%	4.35%	5.03%	5.48%	5.97%	8.40%	12.88%
ROW	66.67%*	41.24%	4.70%	3.25%	2.47%	2.03%	2.59%	3.26%	3.72%	4.27%
RPG	1995	1997	2000	2002	2004	2006	2007	2008	2009	2010
The Mainland	76.52%	82.72%	87.03%	89.61%	90.92%	93.22%	94.14%	93.90%	93.80%	91.78%
Asia	9.95%	7.83%	7.22%	6.62%	5.49%	3.80%	3.41%	3.33%	3.58%	4.87%
ROW	13.53%	9.45%	5.75%	3.77%	3.59%	2.98%	2.45%	2.77%	2.62%	3.36%*

Source: Compiled by the author from UGC statistics (www.ugc.edu.hk).

*Note.** Percentages are rounded up to two decimal places and therefore may not total 100%.

Subsidized Cost of RPG Programs

Another key issue brought forward by the time series analysis is the fact that unit costs of RPG have been subsidized initially by SD programs since 1995, but increasing also by UG and TPG since 2005 (see Fig. 10). Although unit costs of UGC-funded programs only increased slightly from HK\$ 191,000 to HKD 239,000 in 1995 and 2010 respectively, RPG unit costs increased from HKD 364,000 to HKD 521,000 during the same period respectively. In 1995 and 2010 respectively, RPG unit costs was 191% and 218% of the average unit cost of UGC-funded programs.

In contrast, the SD unit cost was HKD 108,000 (57%) and HKD 155,000 (65%) of the average unit cost of UGC-funded programs in 1995 and 2010 respectively, thus greatly subsidizing RPG programs. UG and TPG unit costs remained similar or slightly above UGC-funded unit costs from 1995 to 2007. As of 2010, UG and TPG unit costs of HKD 225,000 and HKD 203,000 reflect 94% and 85% of the UGC-funded programs average unit cost, and as such started to subsidize RPG programs as well. The fact that SD, TPG and then UG programs, in decreasing order of contribution, have subsidized the cost of RPG programs, and that UGC-funded HEIs' research outputs have increased by 69% from 15,973 to 27,019 in 1995 and 2010 respectively⁷ supports Hong Kong policies that

⁷ Data compiled by author from UGC statistics cdcf.ugc.edu.hk/cdcf/searchStatisticsReport.do)

emphasize research and development.

Fig. 10 Average per Student Unit Cost in UGC-Funded Programs

Source: Compiled by the author from UGC statistics (www.ugc.edu.hk)

Using UGC statistical data covering the period 1995 to 2010, this section has shown that in spite of a slight reduction (1.2%) in higher education participation, non-local student and the Mainland student participation increased significantly by 716% and 1,007% during the same period respectively. Furthermore, it established the importance of UG and RPG programs, which saw an increasing level of non-local student participation. The Mainland dominance in non-local participation of UGC-funded programs, especially in UG and RPG programs, has been empirically proven.

Lastly, the fact that UGC-funded RPG costs are subsidized by SD, TPG, and UG programs has been brought out especially in the light of 68% of all UGC-funded RPG places being held by the Mainland students. This time series analysis gives credence to the CM-HK resource allocation issue at least in the higher education arena.

Intra-Nationalization of Hong Kong Higher Education

Although global trends influence Hong Kong and its higher education sector, this study shows that the dimension integrated into the purpose, functions and delivery of post-secondary education are predominantly the Mainland-focused. Historical, cultural, economic, and political factors in the CM-HK relations and the increasing interdependency between the two societies has resulted in another form of internationalization. Hong Kong's predominantly the Mainland focus in its internationalization of higher education initiatives can be seen both in the city state, and in its increasing higher education cooperation with the Mainland.

Taking the CM-HK relations as a regional framework, socio-cultural, economic and political rationales permeate Hong Kong's internationalization of higher education. Meeting domestic higher education demand, attracting the Mainland students to study, remain and work in the city state, maintaining Hong Kong's competitive edge as a service-based economy, and the CM-HK political integration are just some of these rationales. All these rationales fall within what the author terms an "intra-nationalization of higher education," where a sub-national region, such as Hong Kong, focus its internationalization strategy towards its mother country, the Mainland in this particular case.

Meeting Domestic Higher Education Demand

Hong Kong's higher education participation rate has increased from 1–2% in the mid-1970s to over 60% in 2011. This growth figure, however, is masked by outward student mobility, the provision of sub-degree programs, and non-local degrees, which are not recognized by local industry. As stated in an earlier section, Hong Kong's declining outbound mobility ratio and steady gross outbound enrolment ratio suggests a contraction of local higher education places at degree and above level. The time series analysis covering the period 1995 to 2010 presented empirical support showing that there was in fact a 1.2% contraction in total UGC-funded places, which includes the 716% increase in non-local student participation. In fact, as of 2010, 13.54% of total UGC places are taken by non-local students up from 1.64% in 1995.

In order to meet domestic higher education demand, Hong Kong had to expand its higher education cooperation with the Mainland to include setting up campuses in neighboring Shenzhen and facilitating easier entry for Hong Kong students to the Mainland universities. The Shenzhen Campus of Chinese University of Hong Kong will not only serve mainlanders, but the Hong Kong community as well. This becomes more apparent in the recently piloted higher education scheme which exempts Hong Kong students from taking the Joint Entrance Examinations for Universities in the Mainland.

Attracting the Mainland Students

Hong Kong's economic integration and demographic problem requires a continuous inflow of quality migrants. Hong Kong educated the Mainland Chinese, given their understanding of the Mainland market and culture, have been specifically targeted by the city state. This is seen by the immigration policies targeting the Mainland talents and students graduating from Hong Kong HEIs. In fact, it was only with immigration arrangements for non-local graduates in 2008 that non-Mainland Chinese graduates were facilitated by Hong Kong immigration policy.

This paper's time series analysis clearly shows a Mainland bias in UGC-funded non-local students. The Mainland students in UGC-funded programs comprise 86.64% of non-local students as of 2010, accounting for 11.73% of the 13.54% non-local students in 2010. Furthermore, the 1,007% increase in the Mainland students in UGC-funded programs greatly outpaced the 716% increase in non-local students during the period 1995–2010.

Maintaining Hong Kong's Competitive Edge

Hong Kong's higher education reforms have been designed to support the city state's competitive edge, a service-based economy within the context of CM-HK economic and political integration. Aside from the increased domestic higher education provision, higher participation rates and attracting the Mainland talents and students into the city state, Hong Kong higher education has focused on improving its human capital and its research capacity.

In the 1980s and 1990s, Hong Kong established polytechnics and post-secondary colleges, and increased higher education provision and participation. In the 2000s, it has focused on research, relaxed non-local student quotas, and increased CM-HK higher education collaboration. Furthermore, Hong Kong's regional education hub initiative, its new academic programs and the establishment of Shenzhen based research institutes and state key laboratories are designed to increase cooperation, grant access to the Mainland human capital and research funds, and probably promote further higher education integration in the future.

The time series analysis not only shows increasing non-local participation in UGC-funded UG and RPG programs, but that these programs are dominated by the Mainland students. In fact, the Mainlanders account for 82.85% and 91.78% of non-local UGC-funded UG and RPG places respectively and accounted for 68% of all UGC-funded RPG places in 2010. Hong Kong's focus on research and its research outputs were also shown in terms of other higher education programs (e.g., SD, UG, and TPG) subsidizing RPG programs, and the 69% increase in research outputs during the period 1995–2010.

Facilitating Political Integration

Hong Kong higher education reforms are also designed to facilitate further political integration. In fact, Hong Kong's internationalized higher education, its strong links with the Mainland, and its role as a global center for China studies are being highlighted in its drive to be a regional education hub, and a world city (University Grants Committee, 2004, 2010, Cheong et al., 2009). Furthermore,

the University Grants Committee (2010) explicitly stressed Hong Kong being an integral part of China, recognized the necessity for further integration, and the need for Hong Kong students to engage with and know more about the Mainland, supporting the author's argument of intra-nationalization of Hong Kong higher education at least at the policy level.

Summary and Conclusion

Hong Kong's higher education sector has indeed internationalized. Its focus, however, has been the Mainland. As discussed above, its focus in meeting domestic higher education demand, attracting the Mainland students, maintaining its competitive edge and facilitating political integration gives the sense of a strong Chinese Mainland orientation, which is driven by Hong Kong's historical and ongoing social, economic, and political ties. Furthermore, the political, economic and socio-cultural rationales for internationalization of higher education have been presented, while the academic rationale is implicit in these discussions.

Although Hong Kong's higher education reforms closely follow widely recognized concepts and rationales for the internationalization of higher education, the CM-HK ties, the interdependency and clear need for political integration that forms the foundation of Hong Kong's higher education reform are not so much internationalization as intra-nationalization of higher education. Hong Kong higher education's Mainland bias in UGC-funded places, especially in its UG and RPG programs, its immigration policies targeting the Mainland Chinese students, and the significantly high percentage of the Mainland students in the highly subsidized UGC RPG programs support the author's argument.

The intra-nationalization of higher education, a process where a nation's internationalization initiatives are focused on its mother country, clearly exists in the Hong Kong case. Intra-nationalization of higher education, however, is primarily geared towards identity formation and political integration within the reality that Hong Kong is an integral part of the Mainland, in spite of it being a special administrative region under the "one country two system" policy.

Implications of intra-nationalization of higher education in Hong Kong will include a contraction of UG and RPG higher education places in the city state, and a corresponding increase in the Mainland higher education places for Hong Kong students in the longer term. Furthermore, increased intra-nationalization of higher education in Hong Kong might lead to the future CM-HK higher education integration but this will depend on the developments of further political integration and economic developments between the motherland, the Mainland, and the city state, the Hong Kong SAR.

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Appendix 1 Hong Kong Universities Research Centers in Shenzhen (as of April 2012)

The City University of Hong Kong Shenzhen Research Institute (CityUSRI);
 Chinese University of Hong Kong Shenzhen Institutes of Advance Technology (SIAT);
 Chinese University of Hong Kong Shenzhen Research Institute (SZRI);
 Hong Kong University Shenzhen Institute of Research and Innovation (HKU-SIRI).

Source: Compiled by the author from various Hong Kong University websites.

Appendix 2 State Key Laboratories Established in Hong Kong Universities

Base University	Key State Laboratories	Year Established
City University of Hong Kong	Millimeter Waves	2008
	Marine Pollution*	2008
Chinese University of Hong Kong	Oncology in South China	n.a.
	Agro Biotechnology	n.a.

(To be continued)

(Continued)

Base University	Key State Laboratories	Year Established
Hong Kong University	Phytochemistry and Plant Resources in West China	n.a.
	Synthetic Chemistry	n.a.
	Brain and Cognitive Sciences	2005
	Emerging Infectious Diseases	2005
	Liver Research	2010
Hong Kong Polytechnic University	Synthetic Chemistry	2010
	Ultra-precision Machining Technology	2009
	Molecular Neuroscience	2010

Source: Compiled by the author from various Hong Kong University websites; n.a = not available

Note. * State key laboratory on Marine Pollution is a joint laboratory with City University of Hong Kong, Chinese University of Hong Kong, Hong Kong Baptist University, Hong Kong University, Hong Kong Polytechnic University, and Hong Kong University of Science and Technology.

Appendix 3 The CM-HK HEI Collaboration at Degree Level and Above

Name of Hong Kong HEI	Undergraduate	Masters	Ph.D
City University of Hong Kong	1		
Chinese University of Hong Kong		5	
Hong Kong University		6	
Hong Kong Baptist University	1		
Hong Kong Polytechnic University	2	14	1
Cheung Kong Graduate School of Business		1	

Source: Compiled by the author from www.crs.jsj.edu.cn