EDUCATION PAPERS

教育論文 20

The Economics and Financing of Education:

Hong Kong and Comparative Perspectives

Edited by Mark Bray

FACULTY OF EDUCATION THE UNIVERSITY OF HONG KONG

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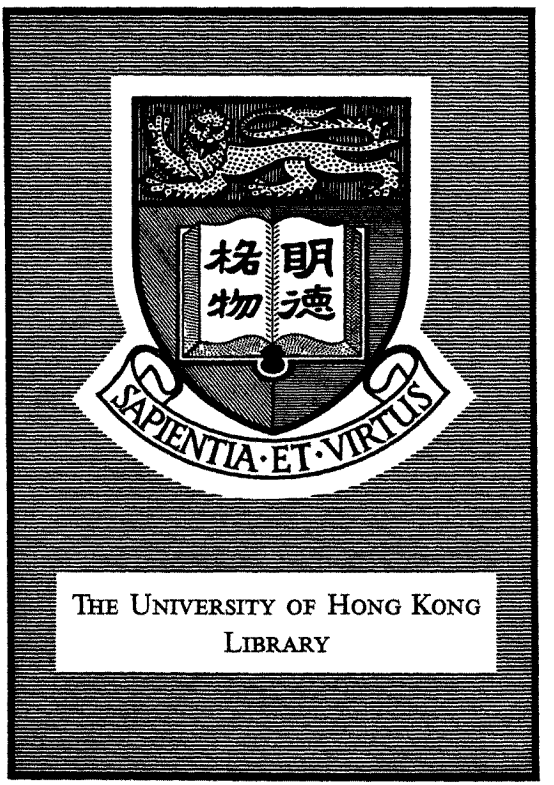
Education Paper 20
Faculty of Education
The University of Hong Kong

Hong Kong 1993



The Economics and Financing of Education

Published in 1993 by:

Faculty of Education,
The University of Hong Kong,
Hong Kong.

Obtainable from the Faculty of Education at the above address.

Local price: HK$45.00 (including postage)

Overseas price: US$12.00 (including postage)

ISSN 1011-7091

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Introduction

Mark Bray

Recent years have brought substantial growth in research on the economics and financing of education in Hong Kong. This research has become increasingly sophisticated, and has proved illuminating to both academics and policy makers.

In 1992, the Chinese University Press published an edited volume on the economics and financing of Hong Kong education (Chung & Wong 1992) which represented a milestone in the advance of the field. However, as the editors indicated in their Introduction (p.xvii), the papers in that volume did not provide complete answers to many interesting policy issues. They were intended to be exploratory studies on an important subject, and were put together in the hope that they would encourage future research in the area.

Chung & Wong's book is certainly achieving that goal, and is the central text in postgraduate courses in both of Hong Kong's university Faculties of Education. Although some papers in the volume presented here were written before the appearance of the Chinese University Press book, others were inspired by that book either directly or indirectly.

As Chung & Wong recognised, their book was far from a complete statement on the field. Nor is the statement anywhere near complete with the appearance of this volume. However, the papers presented here do complement those in the Chinese University Press book in several ways. For example three papers focus on the financing of kindergartens, on the cost and effectiveness of small schools, and on unit costs in higher education, all of which were untouched in the Chinese University Press book. The present volume also includes papers on school fees, the Direct Subsidy Scheme and private schooling, all of which have important implications for policy. Finally, one paper updates material in Chung & Wong's book, noting the major impact on financing of educational developments in the late 1980s and early 1990s.

A further difference between the present volume and that produced by the Chinese University Press is the explicit emphasis here on comparative perspectives. The second paper compares the financing of higher education in Hong Kong and Macau; the fifth paper compares privatisation initiatives in Hong Kong and Singapore; the eighth paper compares higher education unit costs in Hong Kong and the United Kingdom; and the last paper places the Hong Kong experience in an international perspective with particular reference to other parts of East Asia. The virtues of comparative analysis are well established, for it can illuminate features of domestic policy and practice which would otherwise remain unnoticed (Thomas 1990; Crossley & Broadfoot 1992).

It is hoped that readers will find in the pages of this Education Paper further illumination of the many important issues concerning the economics and financing of education in Hong Kong. While much remains to be done, these papers do represent a significant further advance.

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Students' Perceived Ability and their Intentions for Higher Education:

A Test of the Screening/Signalling Hypothesis

Andrew K.C. Wong

Ever since the emergence during the 1960s of human capital theory, education has been linked with enhancement of productivity and economic growth. Many empirical studies of the role of education have concentrated on the supply side of the picture, and the literature is full of measurements of rates of return to education based on cross-sectional data (see Blaug 1978). Consistently high social rates of return to education in the 1960s and 1970s in many countries were used as a justification for quantitative expansion of education (Psacharopoulos & Woodhall 1985).

These studies usually assumed that individuals would exercise rational maximizing behaviour in markets, and few attempts were made to understand the real behaviour of individuals. In reality, it may be suggested, it is rarely easy for students to estimate the benefits associated with additional years of schooling. Moreover, even if expected net returns could be estimated, it does not necessarily follow that students would take up the extra education because of the different subjective 'time preference rate' in interest (Blaug 1972, 1983). Also, lack of ability or disadvantaged home backgrounds may prevent students from pursuing the benefits (Williams & Gordon 1981). For these and other reasons, it is important to have more studies of whether the students who pursue higher education actually take a forward-looking view of earnings prospects in the labour market.

In the 1970s, proponents of the screening/signalling hypothesis criticised human capital theory and claimed that the main function of education was to sort individuals by their abilities. As explained below, it is now generally accepted that educational institutions do screen. However, the question remains whether schools screen for

some *ex ante* innate ability or *ex post* ability which includes the productivity-augmenting effects of education. The screening/signalling hypothesis argues that the demand for higher education results from employers' hiring requirements which are based on educational credentials. These hiring requirements create an incentive for students to maximize their probability of being employed. The hypothesis assumes that the signalling costs, including psychic, time and monetary ones, are low for the high ability students. It assumes that students are aware of their abilities, and that it is in the interest of high-ability students to invest more in education. From the viewpoint of the students, it is immaterial whether schooling is a screen or productivity augmenter (Lazear 1977), and it is on the demand side of education that the screening/signalling hypothesis complements the private rate of return to education of human capital theory (Blaug 1976).

Empirical study from the demand side of education may permit testing of the assumption in human capital theory that students take systematic forward-looking views of earnings prospects. It is also possible to test the screening/signalling hypothesis that students are aware of their ability, and that those students with high ability would invest more in higher education.

The present paper reports on findings from a larger study (Wong 1989) which investigated:

a. whether students are motivated by economic considerations for higher education;
b. the extent to which students are aware of their ability;
c. the effect ability has on the capable students in the pursuit of higher learning; and
d. the influences of students' socio-economic background, quality of institutions, sex, and abilities on the pursuit of higher education.

The study used a questionnaire to gather information, and solicited the views of Hong Kong students on their education intentions.

THE SELECTIVE NATURE OF THE EDUCATION SYSTEM

Among the features of the Hong Kong education system are its selective nature and emphasis on public examinations. Table 1 presents information on the candidates in the secondary school

examination between 1958 and 1976. It highlights the strongly selective nature of the examination system.

Table 1: Secondary School Entrance Examination 1958-76

Year	(1) No. of Primary 6 students	(2) No. of S 1 students	(3) No. of partici-pants	(4) No. Allocated	(5) (4)/(3) (%)	(6) (4)/(1) (%)
1958	-	-	7,573	2,441	32	-
1960	38,897	20,872	13,466	3,295	25	8.5
1962	58,410	34,127	25,966	7,781	30	13.3
1964	70,008	30,517	28,535	8,013	28	11.4
1966	72,144	43,161	30,140	10,027	33	13.9
1968	71,999	48,048	35,932	11,498	32	16.0
1970	80,099	50,686	54,762	16,428	30	20.5
1972	103,996	71,349	79,156	35,620	45	34.3
1974	114,100	94,800	93,501	46,750	50	41.0
1976	111,400	96,200	97,930	63,654	65	57.1

Source: Secondary School Entrance Examination annual reports.

During the 1960s, only around 30 per cent of participating students were successful in gaining aided places in government, aided or private-assisted schools. The percentage of all Primary 6 students gaining places was even lower -- about 13 per cent before 1966, though rising rapidly after that year. Successful students were arranged in order of merit and were given a choice of schools. The choice was usually first Anglo-Chinese government or aided schools, followed by private schools where the medium of instruction was also English, and lastly Chinese middle schools which used Chinese as the teaching medium. Throughout the period, the medium of instruction in secondary schools was a major criterion for selection by the academically capable students.

In 1979, the government made junior secondary education both free and compulsory. The Secondary School Entrance Examination (SSEE) was replaced by the Secondary School Places Allocation (SSPA), which used aptitude tests to measure students' linguistic and numerical abilities. Under the new system, students were grouped

into five ability bands. Band 1 students, who had the highest scores in the SSPA, were permitted to choose their schools first. Almost all chose the government and aided grammar schools. The majority of Band 5 students, who scored the lowest in SSPA, ended up in low-prestige private schools.

The SSEE and SSPA created a distinct difference between government and aided secondary schools on the one hand and private secondary schools on the other. The government and aided secondary schools gained not only the better quality students but also better staff and facilities. The latter were derived from standard requirements laid down by the government for teacher qualifications, teacher ratio, class size and buildings. In contrast, the private secondary schools had low ability students, inferior teachers, larger classes, and inferior buildings.

This grouping of students strictly according to ability resembles the pattern of sponsored mobility described by Turner (1960). Yuchtman & Samuel (1975) showed that in a system where sponsored mobility prevails, institutional factors are significantly stronger than personal factors in affecting the pursuit of higher learning. The quality of schools exercises very strong influence on students' aspirations for higher education.

THE SCREENING/SIGNALLING HYPOTHESIS

The screening/signalling hypothesis contests the view that the fact that people with higher education have higher average earnings is necessarily due to human capital investment. Rather, it is argued, education acts as a filter which identifies individuals with innate abilities. In an imperfect labour market, employers have inadequate knowledge of the marginal productivity of new entrants. In order to avoid mistakes and the cost of finding out who the more productive applicants are, employers use certificates as a proxy for the required qualities. When college graduates are in greater supply, employers simply upgrade the hiring standards, leading to qualification inflation. The social value of education is reduced to a signalling device which helps to place the right person in the right job. This perspective suggests that more education is likely to be consumed than is socially efficient.

Bowman (1980) identified three main variants of the screening/signalling hypothesis:

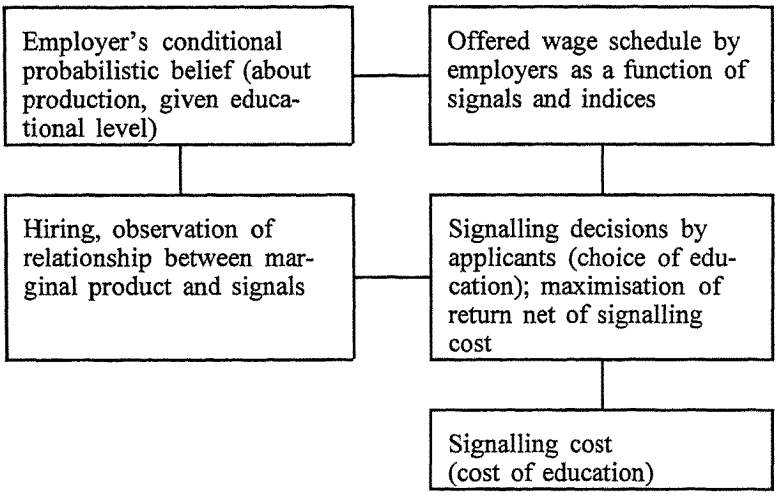
(a) Labour markets are open and there is effective wage competition. However, information is costly. Rational employers use individuals' schooling as a clue, in order to make better guesses as to which individuals will be the most productive -- including which will be better investments for employer-paid formal or informal training.
(b) As in (a), employers are rational, but there is little wage competition. Instead there is queuing for jobs, and individuals' ranks in the queue are determined by their schooling and qualifications.
(c) Human resources are allocated in the interests of a managerial elite, and schooling is used to sort people out for entry into segmented labour markets.

The present study mainly presents the arguments of variant (a). This is basically the position of the neo-classical school of economics. The theoretical work in this aspect is confined to the economics of information and on the functioning of labour markets under uncertainty.

A major question in the screening/signalling hypothesis concerns how information about an individual's productivity is transmitted to potential buyers. There are two sides to the picture: the students who invest in more and more education to indicate to potential employers their high abilities (signalling), and the employers who rely on qualifications to select the potential workers (screening). The present study is mainly concerned with the signalling part of the hypothesis. Screening/signalling is basically one theory, however, albeit with different emphases. As such, the arguments developed below will inevitably touch on both sides of the hypothesis. Although 'signalling hypothesis' is the main term used in the following presentation, it often refers to both screening and signalling.

The accumulation of educational credentials by students as a method of signalling their talents to firms was emphasised by Spence (1973). He observed that in most job markets, employers were unsure of the productive capabilities of individuals at the time that they were hired. What the employers encountered was personal data in the form of unalterable attributes such as race, sex and age. Only some time after hiring could employers learn individuals' true productive capabilities. On the basis of previous experience in the market, employers will have conditional probability assessments over productive capability given various combinations of signals and indices. This is illustrated in Figure 1.

Figure 1: Informational Feedback in the Job Market



Source: Spence (1973), Figure 3.2

Over time, an equilibrium between the employers' beliefs that generate the offered wages upon hiring and the applicants' signalling level of education is reached. The employers' beliefs become self-confirming. It is clearly in the economic interest of highly-productive workers to provide information about their own capabilities if they are aware of them, even if the applicants themselves have to bear the cost of signalling.

TESTING MOTIVATION, PERCEPTION OF ABILITY AND DEMAND FOR HIGHER EDUCATION

In the present study, the motivation of the students who indicated that they would pursue higher learning was assessed by asking the students to agree or disagree with rationales for higher learning set out in a five-point scale. The rationales included:

1. I enjoy studies.
2. I am good at school work.
3. I will get a better job if I carry on with my education.

4. I want to have a better chance in competing with others.
5. My friends are staying in school.
6. I feel people should get as much as education as they can.
7. My parents think I should stay on.
8. I need more education for the kind of job I want.

Items 1, 2 and 6 are factors belonging to the consumption view of education; items 3, 4 and 8 are factors of economic consideration; and items 5 and 7 are factors of social influence. After assessing the statements, the students were asked to indicate which statement they considered the most important.

Students who indicated that they would work after Secondary V were asked to respond to the following statements:

1. I do not like school.
2. I am not very good at school work.
3. Most of my friends are leaving school.
4. I want to have some money of my own.
5. I have more chance of getting a job now than if I wait a year or more.

Responses to these statements gave a parallel data set for analysis.

Students' Awareness of their Ability, and Demand for Higher Education

According to the screening/signalling hypothesis, students are aware of their ability, and those with high ability tend to invest more in higher education. In the present study, Secondary V students who said that they would continue their studies were asked the highest qualification they intended to get and the institution in which they would most like to study. Since the continuation of education to post-secondary requires adequate academic results in the Hong Kong Certificate of Education Examination (HKCEE), the students' academic results were taken as indications of their abilities. The survey of the students' intentions was conducted in early March 1986, two months before they sat for the HKCEE. The results released in August were used to ascertain whether students' intentions for higher learning were related to their ability as measured by the performance in HKCEE.

Given the excess demand for higher education in Hong Kong, it is possible that most students desire higher learning regardless of

their academic ability. However, if the signalling hypothesis is valid, there should still be a close relationship between ability and intention in further education.

It was expected that the majority of those wishing to continue studies after Secondary V would opt for such forms of post-secondary education as teacher training and polytechnic studies, and that only a smaller number would prefer university education. If the signalling hypothesis is accepted, it should be possible to show that those who preferred higher education had higher ability than those who chose post-secondary education. In turn, it should be possible to show that the latter have higher ability than those who preferred to go straight to work after Secondary V. The choice of the form of study and tertiary institutions should also be ability related. If these pieces of evidence could be established, the students' awareness of their ability would be implied.

Factors which Affect the Demand for Higher Education

Investigations were made to see the extent of the interactive influence of socio-economic background, quality of institution, sex, arts or science streams and ability on the demand for higher education. This was an investigation of the social influence on students' educational planning. Many studies on this topic (e.g. Sewell et al. 1957, 1976; Duncan et al. 1975) have established that both socio-economic status and intelligence are positively and significantly related to educational planning for both sexes. The OECD (1979) has identified seven groups of psychological and social factors which affect students' demand for higher education. These include:

1. *The psychological/individual factor*: Individuals' attitudes towards education and work and the planning of their own lives affect their reactions to different lifetime opportunities. Sex role stereotyping is a major determinant of career choices. Often girls are considered to be more 'linguistically' than 'mathematically' inclined, or boys are said to be better in science than arts.
2. *The structural/institutional factor*: Students are primarily motivated by their previous educational experiences. The structure of curricula and courses at the secondary level strongly affects students' demand for higher education. Other factors include streaming within the school, and separation of schools according

to different curricula - two methods frequently used to match students' aptitudes and abilities with curricular possibilities.

3. *The social/familial factor*: Due to the influence of home environment, measured essentially by the father's occupation and parents' education, children from different social origins react differently to occupational and educational opportunities. Success in education is closely linked with family backgrounds in which encouragement is abundant and aspirations are high. Students from working class backgrounds have a higher rate of leaving schooling after compulsory education.

These factors are not competing explanatory models for the demand for higher education. A combination of these factors might explain the change of demand for higher learning better. In the following sections, the relative contributions of the factors of sex, quality of institution and arts/science stream on the students' demand for higher education will be examined.

Collection of Data

A questionnaire adapted from the one used by Williams & Gordon (1981) was constructed to gather data. The questionnaire was designed to take about 30 minutes to answer, so that students could finish it within a 40-minute class period. A trial run was made in October 1985 in four schools, and the data were used for initial analysis.

In January 1986, a stratified randomization was made to select 22 secondary grammar schools. This sample comprised two government, 15 aided and five private schools with a total of 1,621 students,

Table 2: The Sample from which Data were Collected

	Govt.	Aided	Private
No. of schools in sample	2	15	5
No. of school in Hong Kong	37	281	107
% of total schools in the sample	5.4	5.3	4.6
No. of students in sample	152	1,123	344
No. of students in Hong Kong	5,984	44,165	17,548
% of total students in the sample	2.5	2.5	2.0

59.7 per cent being girls and 40.3 per cent being boys. Among them, one was a boys' school, three were girls' schools and 18 were coeducational schools. The nature the sample is shown in Table 2.

The survey was carried out from mid-February to early March, 1986. With a few exceptions, the writer was present in every classroom to answer possible queries. A total of 1,621 students returned completed questionnaires. In September, the Hong Kong Examinations Authority agreed to provide the results of the individual students, which were used as measures of abilities. Altogether, 1,590 cases were identified and used for later analysis.

FACTORS WHICH AFFECT EDUCATION INTENTIONS

Economic Factors

Table 3 shows that the majority of the students who intended to continue studies after Secondary V stated that their main reason was related to economic considerations.

Table 3: Main Reasons given by Students who Intended to Study after Secondary V (n = 1,206) (%)

Reason for Study	All	Girls	Boys
Enjoy study	11.3	13.7	7.4
Good at school work	1.2	1.3	0.9
Will get better job	43.2	41.1	46.7
To have better chance in future	11.5	8.5	16.5
Friends stay in school	0.2	0.1	0.2
People should get more education	10.9	13.3	7.2
Parental wish	3.8	3.5	4.3
Need more education for expected job	17.6	18.3	16.7

Among those who planned to study, 43.2 per cent believed they would get a better job if they stayed on in education; 11.5 per cent felt that they could have a better chance to get a good job; and 17.6 per cent thought they needed more education for the expected job. This gave a total of 72.3 per cent. Only 22.2 per cent of students wished to continue studying for its own sake (items 1, 2 and 6). Peer

influence on the career choice of the students of the two groups appeared to be minimal.

Table 4 shows the main reasons given by students for their choice grouped under the separate headings of economic reasons (items 3, 4 and 8), consumption (items 1, 2 and 6), and parental and peer influence (items 5 and 7). It demonstrates differences in the choice of reason for higher studies. One can therefore argue that Secondary V students have different reasons for higher learning, and that the reasons are more related to economic considerations than otherwise. Breakdown of the three main reasons by gender shows that almost twice as many girls than boys (28.6% compared with 15.5%) subscribed to the consumption view of education. On the other hand, more boys than girls (80.1% compared with 67.8%) emphasised economic factors.

Table 4: Main Reasons for Study Given by Students (%)

Main Reasons	All	Girls	Boys
Consumption	23.6	28.6	15.1
Economic Reason	72.3	67.8	80.1
Parental & Peer Influence	4.0	3.7	4.4

Table 5 shows the reasons given by the 24.0 per cent of students (381 out of 1,587) who opted to work after Secondary V. In Hong Kong, the drive for higher qualifications is so keen that it is not surprising to find that only a small number of students voluntarily chose working after Secondary V. Over one quarter (28.3%) of these

Table 5: Main Reasons given by Students who Intended to Cease Study after Secondary V (n = 381) (%)

Main Reasons	All	Girls	Boys
Don't like school	5.8	5.4	6.1
Not good at school work	55.9	56.9	54.7
Friends leave school	2.4	1.5	3.4
To have one's own money	28.3	30.2	26.3
Easy to get job now	7.6	5.9	9.5

students wanted to work in order to have their own money, and another 7.6 per cent believed it would be easy to get a job after Secondary V. This made a total of 35.9 per cent who were attracted by economic reasons to leave school at this level. The majority, 55.9 per cent, felt that work was preferable to study only because they were not good at school work. It is likely that leaving school at this stage was not their first choice. If they had performed better in school, they would have chosen to continue with studies.

Quality of Institutions, Sex Roles, Arts/Science Streams, and Home Background

In the demand for higher education, the quality of institutions, sex roles and arts/science stream do not exert their influence independently and alone. Arts subjects are more commonly pursued by girls than boys; and students who attend high quality schools may come from families where the parents have higher education levels. The chi-square analysis is limited in its capacity to handle these interactive effects. To examine the interaction of the variables which are categorical data, the log-linear models of the simplest form were used.

Among all the factors which have interactive effects, a number of combinations of variables (modes) could be related to the demand for higher education. The likelihood-ratio chi-square (L^2) was applied to test the hypothesis that the higher-order interactive effects of the variables were zero. If the observed significance level of the likelihood-ratio chi-square of the higher-order effects was large (greater than 0.05), the null hypothesis would not be rejected, which means that no interactive effects existed in the higher-order.

Table 6 contains the test for the hypothesis that higher-order effects for the variables of education intentions, quality of institutions, sex, arts/science stream, father's occupation, parents' education and ability are zero. For K = 3, this is the goodness-of-fit test for a model without third- and higher-order effects. If the observed significant level of the third- and higher-order terms (probability in the table) are large (ranging from 0.9924 to 1), the hypothesis that the third- and higher-order interactions are zero should not be rejected. This means that there are no interactions among the variables on third- and higher-order terms. It appears that only the first and the second-order effects are adequate to explain the data.

Table 6: Test for the Higher Order Effect

K	DF	L.R. Chi-sq	Prob	Pearson Chi-sq	Prob	Iteration
6	187	9.874	1.0000	5.786	1.0000	9
5	183	139.844	.9924	133.437	.9977	20
4	639	532.034	.9992	812.114	.0000	15
3	1061	874.567	1.0000	1036.073	.7023	13
2	1281	2997.004	.0000	5743.604	.0000	2
1	1295	4350.273	.0000	8362.363	.0000	0

In order to reveal the individual terms of the interactive effects of the variables, the backward elimination method was applied. Table 7 contains the final model, which indicates that no more effects are removed from the model since the observed significant level of the variables interaction are all smaller than 0.05.

Table 7: The Interactive Effects of the Variables

Models with Interactive Effects	Degree of freedom	Likelihood Ratio Chi-square Change	Prob
1) ABCD	4	9.805	.0438
2) BCFG	4	20.755	.0004
3) CDE	5	14.936	.0106
4) CDF	1	9.651	.0019
5) AE	75	192.284	.0000
6) AF	4	28.277	.0000
7) AG	2	15.082	.0005
8) EF	10	23.117	.0103
9) BE	81	561.317	.0000

A = Education intentions
B = Quality of institution
C = Sex
D = Arts/Science streaming
E = Ability
F = Parents' education
G = Father's occupation

The results in Table 7 indicate that among the nine groups of variables, only 1, 5, 6 and 7 are related to intention for higher

education (the observed significant level of the likelihood ratio chi-square being smaller than 0.05). At the fourth-order level (four variables), the demand for higher education is related to the quality of schools and institutions, whether the students are boys or girls, and whether they are studying science or arts in Secondary V. At the second-order level, the intention for higher education is related to students' achievement in the HKCEE, their parent's education level, and whether their fathers are in manual or non-manual jobs. The data support the findings on the demand for higher education. Due to space limitations here, the following analysis will focus on groups 1 and 5.

In seeking further education, students are primarily motivated by their previous educational experiences. Other than the structure of curricula and courses, the separation of students into different schools according to ability is an important factor which may severely constrain students' career choices.

In Hong Kong, the differentiation of 'promising' students from the less able ones is carried out early in the education system. One useful way to account for the quality of institution is to use the academic ability of students as the proxy for the quality of institution (Johnson & Stafford 1973). A quality index for each school is thus created which is based on the average of the best five subjects of all the students of the school in the HKCEE (Table 8).

Table 8: Quality Index for Each School

	Low Quality	Middle Quality	High Quality
No. of schools	7	11	4
Index range	1.00 - 2.38	2.86 - 3.72	4.19 - 4.75

Table 9 presents the relationships between career intentions, sex roles, choice of studies (arts or science stream) and the quality of institutions. Girls from high quality schools were more inclined to seek university education than their counterparts from middle quality schools, who in turn were more inclined than their counterparts from low quality schools. On the other hand, girls from lower quality schools were more prepared to work after Secondary V than their counterparts in middle and high quality schools. This was true for both arts and science streams.

Table 9: Education Intentions by Quality of Schools, Controlling for Sex and Stream (%)

Career Intentions	Girls			Boys		
	Quality of Schools					
	Low	Middle	High	Low	Middle	High
Arts						
Work	41.5	21.2	1.8	55.9	28.6	26.8
Post-sec	51.6	59.3	48.7	39.6	48.2	58.5
University	6.9	19.5	49.6	4.5	23.2	14.6
Science						
Work	36.9	12.6	1.3	43.5	10.9	4.3
Post-sec	52.4	55.9	44.2	37.6	56.2	37.1
University	10.7	31.5	54.5	18.8	32.8	58.6

Between boy and girl students, there was some difference in intentions for university education. In the science stream for the three qualities of schools, similar proportions of girls and boys wished to go on to university education. In the arts stream of high quality schools, more girls than boys sought university education. In the arts stream of high quality schools, fewer boys were keen to seek university education than their counterparts in the science stream. They even had a lower intention than their counterparts in the middle quality schools in the arts stream. A further breakdown according to HKCEE results may shed light on this matter.

When the focus was on intended university education taking into consideration HKCEE results (Table 10), it was found that girls in the arts stream of the schools of three qualities performed better than the boys. The difference was particularly obvious in the high quality schools. In the science stream, they were as good as the boys. In the arts stream, they were much better than the boys. This explains why the proportion of girls who sought university education was similar to, if not greater than, that of the boys.

When a comparison is made between science and arts streams, as a whole the science students performed better than the arts students particularly in Grades C and above. This perhaps is the reason why more science students (both boys and girls) opted for university education.

Table 10: Comparison of HKCEE Results between Arts and Science Students who Opted for University Education in Different Quality Schools (%)

GIRLS

	Low Quality		Middle Quality		High Quality	
HKCEE	(1)	(2)	(3)	(4)	(5)	(6)
Results	Arts	Science	Arts	Science	Arts	Science
5 U	37.5	22.2	1.7	0.0	0.0	0.0
5 F	18.8	22.2	10.3	4.5	0.0	0.0
5 E	0.0	22.2	32.8	31.8	17.9	7.1
5 D	37.5	33.3	32.8	36.4	26.8	21.4
5 C	37.5	0.0	19.0	13.6	33.9	45.2
5 A/B	6.3	0.0	3.4	13.6	21.4	26.2
No of Cases	16	9	58	44	56	42

BOYS

	Low Quality		Middle Quality		High Quality	
HKCEE	(7)	(8)	(9)	(10)	(11)	(12)
Results	Arts	Science	Arts	Science	Arts	Science
5 U	25.0	10.0	0.0	0.0	0.0	0.0
5 F	0.0	13.3	7.7	4.5	0.0	0.0
5 E	25.0	30.0	61.5	19.7	50.0	2.5
5 D	25.0	20.0	15.4	37.8	33.3	25.0
5 C	25.0	23.3	15.4	28.8	16.7	45.0
5 A/B	0.0	3.3	0.0	9.1	00.0	27.5
No of Cases	4	30	13	66	6	40

Although the pattern for boys was largely similar to that of girls, there were two exceptions. In both high and middle quality schools, students in the science stream achieved significantly better results in HKCEE than arts students. Boys in the arts stream from the three different quality institutions had low intention for university education. The arts students from the high quality schools had lower intention than the students from the middle quality schools. Closer examination (Columns 9 and 11 of Table 10) reveals that they achieved better results in HKCEE in Grades C and D and than their counterparts in the middle quality schools in Grade C. Yet, their intention for university education was lower.

It was explained above that there is the stereotyping belief that

boys are better in science than arts subjects. The emphasis on a narrow range of academic subjects may further reinforce such a belief in Hong Kong schools. Consequently those who do not choose science subjects are regarded as less capable academically. It is likely that this situation is particularly severe in the high quality schools. Boys in the arts stream in high quality schools may have developed complexes which inhibit ambitious intentions despite their results.

Students' Career Intentions and Awareness of their Abilities

In Hong Kong, the continuation of higher education after Secondary V is constrained by credentials gained in the HKCEE. Despite this constraint, the demand for higher education has been very keen. As many as 74.3 per cent of the students in the sample wanted to carry on with their studies. Did all of them possess the ability to go on? To what extent are students capable of choosing their careers according to their abilities?

The signalling perspective argues that because of hiring requirements, it would be in the interest of high ability students to invest more in education in order to signal to potential employers their ability. In order to do so, students must be aware of their ability and act accordingly. At the same time, it would not be in the interest of the low ability students to invest in education if the cost (both psychic and direct) of investment is high. The question is then whether students are aware of their ability, and whether they act as predicted by the signalling theorists. The data of the present study offer a simple test of the relationship between ability and the intention for higher learning: whether the declared intentions for higher education are backed up by the required grades.

In Hong Kong, higher education is heavily subsidised and the direct cost of higher education is not high. However, the benefits of higher education could be very high, leading to strong demand. It is possible that many students who desire higher education would not have the necessary required standard. Despite this, Table 11 shows that only 29.5 per cent of students who wanted to advance to post-secondary education and 9.3 per cent of those who wanted to continue to university education scored poorly in the HKCEE (five Grade Fs or below). The corresponding figure for those who intended to work was 68.0 per cent. In general, those who wished to continue studying achieved significantly better HKCEE results than those who chose to work after Secondary V. Among those who

intended to continue education, 40.6 per cent of those wanting only to go to post-secondary institutions and 69.3 per cent of those wanting to go to universities achieved grade D or above in five subjects in the HKCEE, thereby satisfying the minimum qualification for matriculation. The corresponding figure for the working group was only 12.2 per cent.

Table 11: Students' Careers Intentions and their Five Best Subjects in HKCEE

HKCEE Results	Education Intentions		
	Work	Post-Secondary	University
5 U	38.1	10.1	3.4
5 F	29.9	19.4	5.9
5 E	19.8	30.0	21.4
5 D	10.6	26.1	29.5
5 C	1.6	12.5	26.9
5 A/B	0.0	2.0	12.9

Those who wished to go to university achieved much better results in the HKCEE than those who aspired only to post-secondary education. At Grade D, the difference between the two groups of students was 29.5 per cent against 26.1 per cent in favour of the university intenders. At Grade C, the difference was 26.9 per cent against 12.5 per cent; and at Grades A and B, the difference was 12.9 per cent against 2.0 per cent.

The division of ability and career intentions between those who preferred to work and those who chose further studies is very clear. Among those who chose further studies, those choosing university education had much better HKCEE results than those choosing post-secondary education. This offers the first clear evidence of awareness of ability in the choice of career intentions.

A second piece of evidence comes from the more detailed choices in the questionnaire, when the students were asked what they would do after Secondary V. The students were given choices as follows:

- work
- repeat Secondary V
- enter two-year Secondary VI,
- enter one-year Secondary VI,

- enter Polytechnic,
- enter Technical Institutes (day-time courses) and
- enter College of Education

The 1,206 who did not choose working selected various forms of full-time education. There are different academic requirements in these studies. If the choice was ability-related, this should have been reflected in their preference for courses of studies.

At that time, most tertiary institutions accepted students from the two-year Secondary VI, which required a higher academic qualification and normally attracted the most able students. The one-year Secondary VI course was geared towards the Chinese University alone and the certificate courses of the Polytechnic, and was not usually ranked by the students so highly. The Colleges of Education and the Technical Institutes were usually students' last choices and the requirements were generally low. It was anticipated that those who intended to repeat would be academically the weakest.

Table 12 indicates that this was exactly how students in Hong Kong made their career choices. There was an apparent hierarchy of preference for different courses of study after Secondary V which was associated with students' ability.

Table 12: A Breakdown of Students' Careers Intentions after Secondary V According to HKCEE Results (%)

HKCEE Results	Work	Repeat Sec. V	Tech Inst	College of Ed	HK Poly	CU S.VI	HKU S.VI
5 D or above	11.8	17.5	22.1	55.3	58.2	58.5	73.5
5 E or below	88.2	82.5	77.9	44.7	42.5	42.4	26.5

Further evidence can be obtained by looking at those who opted for post-secondary and university education. In the questionnaire, those who preferred further studies were asked to indicate the highest qualification they intended to achieve and the institutions they would choose. If the choice was ability-related, it should have been borne out in students' preferences. The University of Hong Kong and the Chinese University of Hong Kong, being the most prestigious universities with the highest standing, were expected to attract the most students, followed by the polytechnics. At that time the Hong Kong

University of Science and Technology had not been opened, and the Baptist College had only been elevated to degree-conferring status in some departments. Ling Nan College was also yet to upgrade its status, and Shue Yan was a private institution offering four-year courses after Form V.

Table 13: The Intentions of Students who Opted for Education after Secondary V, by HKCEE Results (%)

HKCEE Results	HKU	CU	HK Poly	Overseas Univ.	Baptist College	Coll. of Ed.	City Poly	Shue Yan	Ling Nan
5D or above	60.7	53.6	37.6	39.8	53.3	38.3	36.4	25.0	0.0
5E or below	39.3	46.4	62.4	60.2	46.7	61.7	63.6	75.0	100.0
No of cases	448	267	213	113	30	47	22	4	3

Table 13 indicates that the University of Hong Kong indeed attracted the most students with the highest abilities, followed by the Chinese University of Hong Kong. Hong Kong Polytechnic and overseas universities attracted similar percentages of students of comparable quality. In terms of the number of students, Hong Kong Polytechnic and overseas universities came third and fourth respectively. Out of those who intended to seek higher education, over 20 per cent preferred overseas university education. Baptist College came fourth with regard to applicants' ability, but the number of students was small. The City Polytechnic and the Colleges of Education drew students from a similar ability range. Shue Yan and Ling Nan Colleges were the least preferred by students both in number and ability.

CONCLUSIONS

This research aimed to do two things. First, it aimed to establish that Hong Kong students' motivation for higher education was based on economic considerations. Of course it is difficult to draw watertight conclusions from such a survey. A more sophisticated method would show that students pursue education because they see higher private rates of return for the higher level of education (see Wong 1989). Nevertheless, the results do provide a useful piece of evidence.

Second, the research aimed to show that Secondary V students

in Hong Kong are aware of their ability, and that their intentions for higher education are ability driven. This is a test of the screening/signalling hypothesis. The method is not completely watertight; but again it provides a useful piece of evidence. The study could be followed up with methods such as those used by Taubman & Wales (1973), who adopted the 'high and low paying employment' distinction to show that education was used as a screening device through which workers with relatively low education were prevented from entering high-pay occupations. Also, using Mincerian log-earnings function of schooling and following the similar line of arguments by Taubman and Wales, Riley (1979) established that educational screening would be used more extensively in the screened sector where direct observation of an individual's productivity and evaluation of an individual's productivity and evaluation of the person's potential was much more difficult than in other occupations. Both these examples used labour market data for their analysis. The present study is one of the few so far which use student data for investigation.

In Hong Kong, academic performance is the sole selection criterion for higher study, and demand for higher education is very high. Making use of a time gap between the Secondary V students who declared their education intentions when the survey of the present study was conducted and three months later when they sat for the HKCEE, the present study was able to establish that students are indeed aware of their ability. More students of high ability intended to seek higher education than did students of low ability.

However, one must ask whether this phenomenon could be interpreted other than through the screening/signalling hypothesis. After all, while it is established that students are aware of their ability and that education intentions are ability related, the signalling view is only implied. Selection to secondary schools in Hong Kong is made largely on ability criteria. Continuous exposure of the students to this system may have developed among them a sense of their 'worth'. It is possible that students who are at the end of their secondary school study become aware of their general ability. The academically weak students from low and middle quality schools would be more ready to accept their 'inferiority' and to be less ambitious. They may be more ready to settle down in the early stage of their careers, while the able students would continue to forge ahead for higher education. It may be that some effects of 'sponsored' mobility as described by Turner (1960) are working in the Hong Kong schools.

Yet the above explanation would not deal the screening/signal-

ling hypothesis a devastating blow. In fact there need not be contradiction between the two perspectives. The screening/signalling hypothesis assumes students' awareness of their own general ability (Stiglitz 1975). It is possible that students become sharply aware of their own ability through the 'sponsored' system of education, and are economically motivated to seek further education. It is also possible that the 'sponsored' system of education plays a part in forming the 'psychic' cost of the weak students which discourages them from the continuation of further education.

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Financing Higher Education:

A Comparison of Government Strategies in Hong Kong and Macau

Mark Bray

Hong Kong and Macau have much in common. They are geographically close to each other, and they share a common cultural heritage. They both rely heavily on foreign trade, and in recent years have achieved high rates of economic growth. They are both colonies of European powers, and are both scheduled for reintegration with China at the end of this century.

Their systems of higher education, however, display marked differences. Hong Kong has an older and larger system, which is largely controlled and financed by the government. Macau has a younger system which commenced as a private venture and has only recently been taken over by the government.

This context provides an interesting set of contrasts for analysis of higher education finance. Both territories have embarked on ambitious plans for educational expansion. These plans have some similarities, but also display significant differences. This paper explores the comparisons, paying particular attention to the proportions of government budgets devoted to education, and to policies on higher education fees and loans.

BACKGROUND

Hong Kong and its System of Higher Education

Although few readers of this publication need an introduction to Hong Kong, it is useful to highlight some features for subsequent comparison with Macau. Hong Kong has a population of about 5.8

million. The economy has prospered in recent years, and per capita GDP was estimated at HK$110,000 in 1991 (Hong Kong 1992, p.399).

Higher education is taken here to cover the institutions funded by the University and Polytechnic Grants Committee (UPGC), of which there were seven in 1993, plus a few other institutions. The UPGC-funded bodies were three universities, two polytechnics, the Baptist College, and Lingnan College. The Open Learning Institute (OLI) is not funded by the UPGC, but is also an important part of the higher education sector. The OLI was established in 1989 and offers degree-courses through distance education. It was initially funded by a government subvention, but became self-financing in 1993. Additional post-secondary institutions such as Shue Yan, Chu Hoi and Sun Ya Colleges are registered with the government but are run privately and not permitted to offer degrees.

Higher education in Hong Kong is strictly controlled by the government. The sector has been mainly modelled on that of the United Kingdom, and private institutions have not been encouraged. Higher education enrolment rates have been low. In the mid-1980s, less than 3 per cent of the age group in Hong Kong was able to study at local universities. This figure compared unfavourably with the 5 per cent in Singapore and 10 per cent in the United Kingdom (Chow 1985, p.38). The low enrolment rate permitted the government to maintain high-cost institutions which charged low fees.

The intense competition for local tertiary places forced many people to study abroad. In the mid-1980s Hong Kong had as many students abroad as at home. Postiglione (1987, p.51) reported figures of 12,000 students in the USA, 10,000 in Canada, 4,000 in the United Kingdom, 3,000 in China, and 5,000 in France, West Germany, Taiwan and other places. The total of 34,000 far exceeded the 19,000 enrolled full-time in Hong Kong's government-funded tertiary institutions. The figure for the USA was particularly notable. For every 500 persons in Hong Kong, one was enrolled at an American university. Numbers continued to rise in the early 1990s (Shive 1992, p.223).

However, availability of local places has changed markedly in recent years. Because people have misgivings about reunification with China in 1997, Hong Kong has suffered severely from emigration and brain drain (Emmons 1988; Skeldon 1991). Partly to replace the talent lost through emigration, and partly as a public demonstration of self-confidence, in 1989 the government devised dramatic plans for higher education expansion. The Governor announced that first-year first-degree places would expand from about 7,000 in 1990 to about 15,000 in 1995 (Wilson 1989, p.15). The latter figure was subsequently

reduced to 14,500, but the government still aims to provide higher education places for 25 per cent of the age group. By international as well as local standards, this is a dramatic figure. One major question facing the government is how to finance it.

Macau and its System of Higher Education

Macau has a population of about 400,000, much smaller than that of Hong Kong. As might be expected, therefore, it has fewer institutions of higher education. Macau is also less prosperous, with a *per capita* GDP of Ptc90,700 (HK$88,100) in 1991 (Macau 1992, p.3). However, in recent years Macau has achieved high rates of economic growth (Cremer 1989; Feitor & Cremer 1991).

Successive governments in Macau have been more tolerant of private education than have their counterparts in Hong Kong. Indeed official policies have been *laissez faire* in the extreme. Until recently the authorities have only been interested in the small number of official schools which mirror those in Portugal and serve expatriates and the assimilated elite (Alves Pinto 1987; Bray & Hui 1991). In the mid-1980s these schools served less than 10 per cent of the total school population. Children who did not attend official schools either went to private schools run by churches, philanthropic bodies or businessmen, or did not go to school at all. The private sector was almost totally unregulated, and was extremely diverse.

Macau has an ancient tradition of higher education. A university was founded in 1594 and taught theology, humanities, Greek, Latin, rhetoric and philosophy (Pires 1991, p.16). However, that institution was closed in 1762. Only since 1981 with the foundation of the University of East Asia (UEA) has Macau again had a tertiary institution of its own. In 1991 the name of this institution was changed to the University of Macau (UM).

The UEA/UM has an unusual history. It was launched as a private enterprise, and chiefly sought to tap demand in Hong Kong rather than Macau. Its founders were Hong Kong businessmen who had noted the excess demand for tertiary education in Hong Kong. They would have liked to establish their university in Hong Kong, but were thwarted by regulations which prohibited the operation of private universities. Macau had no comparable regulations, and its authorities were much less antagonistic to the notion of a private university. Macau therefore seemed a good site, within easy reach of Hong Kong and also with its own tertiary education needs (Mellor

1988, pp.3-6).

Since the university was a commercial venture, its principal objective was to secure financial profit; and since it existed primarily to tap demand from outside Macau its principal working language was English rather than Portuguese.

In 1988 the main body of the university was purchased by the Macau government. The change of ownership of course brought a change in philosophy and outlook. It also had far-reaching financial implications for the Macau government.

A further development came in 1991 when the Polytechnic College of the university was separated from its parent body to become the Macau Polytechnic. It offers courses in hotel management, tourism, computers, social sciences, commerce and language, at certificate, diploma and degree levels.

PATTERNS OF GOVERNMENT EXPENDITURE ON EDUCATION

Expenditure in Hong Kong

Table 1 of Cheng's paper in this publication (p.155) shows public expenditure in Hong Kong as a percentage of the total government budget. During the last decade and a half, the percentage has averaged around 17 per cent. While many governments devote higher proportions of their budgets (World Bank 1992), the proportion in Hong Kong may nevertheless be considered fairly high.

On the other hand, as also noted by Cheng, government expenditure on education expressed as a percentage of GDP, which in recent years has averaged below 3.0 per cent, seems rather low. The Hong Kong government does not compute a figure for GNP, and in this respect it is difficult to compare Hong Kong's statistics with those produced by UNESCO and other bodies. However, for present purposes the difference between GDP and GNP is not important. UNESCO figures show much higher percentages both in Western industrialised countries and in many less developed countries (UNESCO 1991, pp.142-5). Comparison with the other three 'Asian Dragons' also shows a low Hong Kong figure.

Expenditure in Macau

In comparison with Hong Kong, expenditures in Macau during the

1970s and early 1980s were extraordinarily low. Indeed the 2.2 per cent of the total budget devoted to education in 1975 was among the lowest in the world. The figures reflected first the government's lack of interest in any type of schooling outside the official Portuguese schools, and second the absence of a tertiary education sector.

In the late 1980s, this situation began to change. The government embarked on a major reform of the system, part of which involved grant of subsidies to private schools (Rosa 1989; Macau 1990a, 1991a). Also, as noted above, in 1988 the government purchased the main campus of the University of East Asia and then commenced provision of sizeable annual grants to the institution. Table 1 does not indicate the full extent of the change because it excludes expenditure on student welfare and on tertiary education. Also, the proportion of the budget devoted to education remained fairly constant despite increases in real spending because the total budget increased. The most costly items in the budget were an airport and a second bridge from the mainland to Taipa Island.

Table 1: Public Expenditure on Education in Macau as a Percentage of the Total Budget and of GDP

Year	% of Budget	% of GDP
1975	2.2	n.a.
1977	2.7	n.a.
1979	2.1	n.a.
1981	3.3	n.a.
1983	4.7	0.5
1985	3.5	0.7
1987	5.5	0.7
1989	6.4	0.9
1990	6.5	0.5
1991*	9.2	0.7

Note: These figures exclude expenditure on student welfare and on tertiary education.

* = estimate n.a. = not available. The absence of figures for the 1970s reflects the *laissez faire* attitude of the government at that time.

Source: Government of Macau.

HIGHER EDUCATION FEES AND LOANS

Fees and Loans in Hong Kong

Although Hong Kong has a long tradition of fees for higher education, revenue from fees has usually covered only a small proportion of costs. During the last three decades the highest fee level was charged in 1962 at the University of Hong Kong, when income covered about 16 per cent of total recurrent costs (Director of Audit 1986, p.10). After that time proportional fee income constantly slipped. By 1982 fees at the University of Hong Kong covered only 3.8 per cent of recurrent costs, while fees at the Chinese University of Hong Kong covered 5.8 per cent (Director of Audit 1986, p.11).

In 1973 the government had recommended that fees should cover at least 12 per cent of recurrent expenditures. For the next decade and a half, however, this recommendation was never implemented. The Director of Audit (1986, pp.10, 11) blamed this failure on obstruction from the tertiary education institutions, on poor information flow on actual fee levels, and on lack of official persistence.

In 1987 the government reviewed the situation and reasserted the desirability of the 12 per cent formula (Hong Kong 1987, p.16). Estimates of institutional income for 1988-89 had already been prepared as set out in Table 2. A schedule was drawn up through which fees in all institutions would reach 12 per cent in 1994.

Table 2: Estimated Income from Higher Education Fees as a Percentage of Recurrent Costs, 1988-89

University of Hong Kong	6.5%
Chinese University of Hong Kong	7.3%
Hong Kong Polytechnic	10.8%
Hong Kong City Polytechnic	7.9%
Baptist College	12.1%

Source: Director of Audit (1986), p.11.

As the Director of Audit noted, the low level of fees was particularly regrettable because the government had since 1969 operated a system of student loans. The loan scheme aims to ensure that no eligible student who has been offered a place in an institution of

tertiary education should be unable to accept it for lack of means. To a large extent it seems to have been successful in this goal (Bray 1992a; Ma & Chow 1992).

When the loan scheme was first proposed, the universities were requested to review their fees. In the words of the Director of Audit (1986, p.10), "it was important that fees should be increased once the student finance scheme was introduced as otherwise the more wealthy students would be subsidized unnecessarily". For some years this view was ignored, but the government heeded the 1986 advice of the Director of Audit with its move to cover 12 per cent of recurrent costs through fees. Then in 1991 the government made a further move, announcing that by 1997 fees would cover 18 per cent of recurrent costs (*Hong Kong Standard*, 7 February 1991). Yet even at this figure the subsidy remained considerable; and, for reasons that were unexplained, capital costs remained totally ignored in the calculation.

Between 1969 and 1988 the loan scheme was operated by the secretariat of the UPGC. In the latter year it was transferred to the government's Education and Manpower Branch. The scheme allows for grants as well as loans, with the former covering faculty expenses, tuition charges and student union fees, and the latter meeting living expenses. Only the poorer students obtain grants as well as loans. Until 1987 loans were interest-free, but since that time they have been subject to interest charges of 2.5 per cent which start to accrue at the time of graduation. Loans normally have to be repaid within five years of graduation.

International survey displays widely varying coverage in assistance schemes. Woodhall (1983, p.16) indicated that in Sweden and Great Britain 70 to 90 per cent of students in higher education received grants or loans, whereas the proportion in Japan was around 11 per cent (Japan Scholarship Foundation 1985, p.4). Hong Kong falls between these two extremes, though the proportion of students receiving loan assistance fell from 63.5 per cent in 1979-80 to 30.9 per cent in 1991-92 (Table 3). As in other countries, assistance is only available on a means-tested basis.

The fall in the percentage of grants and loans awarded after 1982 partly reflected growing prosperity and therefore diminished need, but also reflected tightened administrative procedures. Each year, applications are randomly selected for checking by the computer, which ensures an appropriate sample by taking account of different income bands and institutions. Officers also undertake site visits to verify details. In the early 1980s about 35 cases a year were referred for prosecution. However, the number fell to five in 1985-86, and no

cases were prosecuted between 1989 and 1992. The fall in prosecutions reflected improved initial authentication procedures and wider awareness of the potential consequences of attempted fraudulence.

Table 3: Numbers and Percentages of Students Receiving Assistance

Academic Year	Full-Time Students	No. of Grants	Grants as % of Student Population	No. of Loans	Loans as % of Student Population
1979-80	16,135	6,375	39.5	10,239	63.5
1980-81	17,063	6,550	38.4	10,482	61.4
1981-82	17,279	9,148	52.9	10,413	60.3
1982-83	19,898	8.262	41.5	9,943	50.0
1983-84	21,156	8,249	39.0	9,843	46.5
1984-85	22,412	8,940	39.9	10,381	46.3
1985-86	23,546	9,128	38.8	10,734	45.6
1986-87	25,929	8,356	32.2	9,503	36.7
1987-88	27,470	6,852	24.9	8,457	30.8
1988-89	29,330	6,486	22 1	8,022	27.4
1989-90	30,850	6,284	20.4	7,873	25.5
1990-91	32,490	6,842	21 1	8,660	26.6
1991-92	38,429	8,976	23.4	11,865	30.9

Sources: UPGC's Secretariat 1983, pp.22-4; 1985, pp.4, 7; 1987, pp.22-3; unpublished data from Student Finance Section, Education & Manpower Branch, Hong Kong.

Table 3 also shows a sharp increase in the number of loans in 1991-92 compared with the previous year. This partly reflected an increase in the number of applications. The Joint Committee on Student Finance (1992, p.1) reported receipt of 15,372 applications in 1991-92 compared with 10,555 in 1990-91. The Committee attributed this increase to:

- simplification of application procedures, including removal of the requirement of statutory declarations to support applications,
- enhanced publicity about the loan scheme,
- extension of the scheme to Lingnan College and the Hong Kong University of Science and Technology, and
- the overall increase in student population.

The move to simplify procedures was particularly significant.

The system as it stood was very complex, and required work from so many people that it was sometimes counter-productive. For example, Student Affairs officers in the tertiary institutions had reported in the past that in some cases students' family members refused to share their incomes or even to declare them, and that it was difficult for students to acquire the necessary supporting documentation (Ha 1988, p.8; Brandon 1989, p.2). Student Affairs officers did feel that the few needy students who were unable to secure government funds were helped by institutional funds, and therefore that it remained true that no student was prevented from taking up a tertiary education place by lack of finance. However, the Student Affairs officers pointed out the inappropriateness of the institutional funds being used to help individuals who should really have been helped by the main scheme.

On matters of loan recovery, the Hong Kong government has a good record. In 1992, only 231 default cases were outstanding even though many thousands of loans had been granted since the inception of the scheme. Apart from measures specifically adopted by the lending authorities, default rates depend on graduating students' financial standing. In this connection it is worth highlighting analysis by the Director of Audit (1985), who determined the proportion of monthly salaries needed for repayment of loans in various occupations. His results, reproduced in Table 4, suggest that existing repayments represented only 6 to 7 per cent of total earnings and 13 to 42 per cent of incremental earnings. The Director wished to show that salaries were high enough for students to be able in the normal repayment period to repay all the assistance given to them, and he recommended that the grant component should be turned into a loan.

Table 4: Percentage of Earnings which would be Required as Repayment of Full Loans

Institution Graduating from	% of Total Monthly Earnings		% of Extra Monthly Earnings	
	Existing Loan Repayments	Total Assistance	Existing Loan Repayments	Total Assistance
Hong Kong University	6%	8%	20%	30%
Chinese University	7%	10%	27%	37%
HK Polytechnic				
Higher Diploma	7%	9%	42%	58%
Diploma	6%	8%	13%	18%

Source: Director of Audit (1985, p.23).

In the event, the government chose not to accept the Director's advice, arguing that "it must be obvious that not all graduates become civil servants and that hardship would result in a number of cases" (Hong Kong 1986, p.42). This statement omitted recognition that the Director's calculations were based on private sector as well as civil service figures, though the point that some graduates might choose not to enter immediate wage-earning employment (e.g. because they wished to become housewives) was still valid. A similar observation has been made by a United Kingdom study based on evaluation of European practices (Le Métais 1987, p.2):

> Unless safeguards are built in to protect the individual against intolerable financial burdens in later life, the deterrent effect may harm both the individual and the nation, whilst the financial gains appear to benefit solely the moneylenders and their shareholders.

The study referred to safeguards in the Netherlands, where ex-students who have made monthly repayments for 15 years may have remaining debts written off if their incomes have not lived up to expectations. A similar arrangement exists with a 20-year deadline in the Federal Republic of Germany.

No comparable safeguards exist in Hong Kong, and the European arrangements are in sharp contrast to Hong Kong's requirement that loans should be repaid within just five years. However, the employment prospects for graduates in Hong Kong have been much better than in Europe, and the combination of high salaries and ready availability of low-cost domestic help has encouraged even young mothers to remain in employment after graduation (Chow 1985, p.38; Hong Kong 1992, p.112). Yet the massive tertiary expansion embarked on in the late 1980s is likely to reduce rates of return in the 1990s and after (Yung 1991), and considerable uncertainty exists about the economic climate. These factors may require future revision of present conditions for repayment.

Fees and Loans in Macau

For the first seven years of its existence the University of East Asia was primarily a commercial enterprise. The owners were anxious to avoid the image of rapacious capitalists, but nevertheless charged the highest fees that were consistent with their aspired image and the ability of the market to pay. Differences in course structure and

content obstruct direct comparisons between the level of fees in Macau and Hong Kong, but fees in Macau were at least four times as high as those in Hong Kong.

Despite the much higher fee levels, the UEA attracted many Hong Kong students. Indeed in 1986/87 they comprised 73.3 per cent of the total (Mellor 1988, p.187). The number of Hong Kong students provides clear evidence of the extent of demand. Even though fees at the UEA were much higher than in Hong Kong institutions, the only alternative for many students was to go to Europe, Australia or North America where they would incur still higher costs.

However, the composition of the student body was in some respects problematic. The government of Macau was uncomfortable with the fact that local students formed only a minority and, particularly after the purchase of the university in 1988, embarked on steps to alter the balance. Table 5 shows that 1988/89 fees remained much higher in the UEA than in either of Hong Kong's universities, but in 1989 the Macau government decided to subsidise fees for local students by 40 per cent. The estimated cost of this measure was Ptc10 million (HK$9.7 million) in the first year (Hui 1990, p.1). Partly as a result of this move, by 1990/91 the proportion of Macau students in the university had risen to 83.0 per cent (Lau 1992, p.3). After the establishment of the Macau Polytechnic in 1991, the subsidy was made available to students in that institution as well as in the university.

Table 5: Annual Tuition Fees for Degree Programmes in Macau and Hong Kong (HK$)

	1988/89	1992/93
University of Macau	HK$33,980	41,262
Universities in Hong Kong	7,500	11,600

Sources: University Calendars.

The government of Macau, unlike its counterpart in Hong Kong, also grants fee subsidies as a way to encourage enrolment in particular specialist fields. In 1992/93, the following specialist subsidies were provided at the University of Macau:

- 90 per cent for courses in education,
- 85 per cent for courses in law, public administration (in Chinese) and translation, and
- 70 per cent for courses in Portuguese studies.

Students accepting the subsidies were required to agree to work in Macau following completion of the courses for a period at least equivalent to the duration of the courses.

In addition to these subsidies, the government operates a scholarship scheme. For over 10 years a scheme has supported overseas study. The scheme was primarily intended for study in Portugal, though did also permit studies in other countries. In 1986 the scheme was enlarged to encompass local study at the UEA, and it now includes a loan as well as a grant element. The scheme was markedly expanded in the late 1980s. In 1991/92 1,623 students were given loans, among whom 897 studied in Macau and 726 went abroad. This was a substantial increase over previous years (Table 6).

Table 6: Number of Macau Students Granted Tertiary Education Loans, by Country of Destination

Destination	1988/89	1989/90	1990/91	1991/92
Macau	265	469	716	897
Taiwan	265	322	338	342
China	161	202	210	202
Portugal	30	73	91	125
USA	33	27	30	20
Hong Kong	29	31	22	23
Australia	5	9	10	7
Canada	14	12	9	5
Others	8	3	5	2
Total	*810*	*1,148*	*1,431*	*1,623*

Source: Government of Macau.

According to the conditions operating in 1990/91, to be eligible for loans students were required to have been born in Macau or to have been resident for at least seven years. On the rates operating in 1990/91, applicants were granted loans according to four income bands as indicated in Table 7. Students in China had a lower ceiling

on loan entitlements than students elsewhere. On the other hand, the rate for Macau was the same as the rate for all other locations even though some of them (e.g. the USA) may be assumed to have been much more costly. This made administration simple, though was arguably somewhat discriminatory, especially since many subjects could not be studied locally.

Table 7: Income Bands and Loan Rates for Tertiary Education, Macau, 1990/91

Scale	Monthly Family Income (Patacas)	Ceiling of Loan Eligibility (Ptc per month) Other	China
I	0 - 1,500	1,650	750
II	1,501 - 2,500	1,550	650
III	2,501 - 3,500	1,450	550
IV	3,501 - 4,500	1,350	450

Source: Macau (1990b), p.1825.

The stipulated maximum periods for repayment of loans are shown in Table 8. Repayment periods were graduated according to the length of training. At the lower end of the scale conditions seem less generous than those in Hong Kong, but at the top end they are more generous. No grace period was permitted, but loans were free of interest.

Table 8: Loan Repayment Periods, Macau

Length of Study	Maximum Repayment Period
1 year	2 years
2 years	4 years
3-4 years	6 years
5-6 years	8 years
7-8 years	10 years

Source: Macau (1990b), p.1823.

CONCLUSIONS

As noted at the beginning of this paper, Hong Kong and Macau have many similarities. They both rely heavily on foreign trade, they are mainly populated by people of Chinese ethnicity, they are both colonies of European powers, and they are both scheduled for reintegration with China at the end of this century.

Their education systems, however, display marked differences. The government of Macau has recently embarked on an education reform, but until the late 1980s spent very little on education. For most of the present century Macau had no local provision of higher education, and when that situation changed in 1981 it was with establishment of a private rather than a government institution. The government of Hong Kong, by contrast, has been much more generous to the education sector, has long supported a significant higher education sector, and has insisted on much stronger government control.

In the late 1980s, patterns in the two territories began to converge. The government of Macau greatly increased its expenditure on education. In 1988 it purchased the main body of the University of East Asia, which it renamed in 1991. Fees at the university remained high, but the government provided a 40 per cent subsidy for local students. The authorities also launched a loan scheme for both local and overseas study. The Hong Kong government had a much older loan scheme. However, in the late 1980s it decided to raise fees, and it increased them further in the 1990s.

The decision of the Macau government to launch a loan scheme may be considered part of a worldwide trend. According to Woodhall (1983, 1987), the oldest loan schemes were initiated on a small scale in Europe, the USA, Colombia and India in the 1950s. During the 1960s and 1970s new schemes were launched in a wide range of industrialised and Third World countries, and they became particularly common in Latin America and the Caribbean. The 1980s brought further proliferation of loan proposals in such countries as Australia, Nigeria, Ghana, Ivory Coast, Malaysia, the United Kingdom and even in China (Woodhall 1987; Le Métais 1987; James & Hoenack 1988; Li & Bray 1982).

However, in both Macau and Hong Kong many government subsidies still go to the rich as well as to the poor. The 40 per cent fee subsidy at the University of Macau was given to all Macau students regardless of their incomes; and a similar point applies to the institutional fees in Hong Kong, which even at the new targets

announced for the 1990s (18 per cent of recurrent costs) will retain a subsidy of 82 per cent of recurrent costs and 100 per cent of capital costs. Moreover in Macau the loans were provided interest-free, and although in Hong Kong a 2.5 per cent interest charge was introduced in 1987 this cannot be described as much more than nominal.

In the Macau case, the decision to operate in this way was chiefly made for political reasons. The authorities were anxious to increase the number of local students in their university, and felt that the subsidy scheme would be a good way to do it. There may be some danger that a precedent has been set and that high expectations may obstruct the government from reducing subsidies in the future. If the Macau government persists with its plan not only to expand higher education but also to improve the rest of the system, the authorities may find it necessary to reduce subsidies to those who can afford to pay, and to introduce interest charges on the student loans. Development of the kindergarten, school and polytechnic sectors will increase the pressure on government finance.

Meanwhile, it is also instructive to note other measures to promote self-financing in higher education. Most notable in Hong Kong is the Open Learning Institute, which is expected to cover its own costs. When the Hong Kong government wished to increase the number of graduate primary school teachers following a recommendation by Education Commission Report No.5 (Hong Kong 1992), it anticipated that most serving teachers would enrol with the Open Learning Institute, paying full-cost fees, rather than with the UPGC-funded institutions. Macau teachers have long been served by a distance-education upgrading course offered by the South China Normal University in Guangzhou, and new developments were brought in 1992 by the creation of Macau's own open university, which was a joint venture between Lisbon's open university and what used to be the East Asia Open Institute affiliated to the University of East Asia.

These observations suggest that although differences between the territories will of course remain, there is also substantial convergence in the features of their education systems. This convergence has also been noted in aspects of primary and secondary education (Bray 1992b), and is partly attributable to the common political framework brought by impending reintegration with China at the end of the century.

Acknowledgements: This is a revised and updated version of a paper first published in *Higher Education*, Vol.20, No.1, 1991. Permission from the editor and publisher to reproduce sections of that version is gratefully acknowledged. Helpful comments were also received from Hui Kwok Fai.

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School Fees in Hong Kong Secondary Education

Martty Wong

Free education, at least at the elementary level, is a common public service in most parts of the world. Especially in developed countries, it is considered a basic human right. Although recent years have brought some shift towards fee-charging education, this shift is very small outside developing countries which face financial stringency.

Hong Kong is a prosperous industrial territory, a world financial centre, and an international city subject to western influence. The fact that its government has provided free education is therefore unsurprising. Free education was launched at the primary level in 1971, and extended to the junior secondary level in 1978. However, within the public sector fees are still collected at the senior secondary and post-secondary levels, and the present policy should not necessarily be taken for granted as appropriate and unchangeable.

The World Bank has been among agencies advocating fees for education and health in developing countries on the grounds of both efficiency and equity. This notion is still controversial and may have serious political implications for governments that wish to introduce or reintroduce fees. However, the concept deserves careful consideration not only in developing countries but also in Hong Kong. This paper provides data on current fee levels, and comments on the appropriateness of those fees.

THE LEVEL OF FEES

Hong Kong's secondary schools are classified as government, aided or private. Schools in the first group are totally financed and operated by the government, while aided schools are run by voluntary bodies with government aid. Private schools may be non-profit-making or profit-making. Some non-profit-making schools receive

financial assistance from the government by capitation; and private schools are eligible to join the Bought Place Scheme (BPS) and the Direct Subsidy Scheme (DSS). Schools run by the English Schools Foundation also receive financial assistance from the government.

Education in Hong Kong has expanded very rapidly in the last three decades. A 1965 White Paper (Hong Kong 1965) set universal primary education as an immediate aim, which was achieved in 1971. Seven years later, the government made nine years of education free in the public sector. The 1979 School Attendance Order made schooling compulsory for all pupils below the age of 15 or who had not yet completed secondary Form 3.

Under these arrangements, no fees can be charged in government or aided schools for primary or junior secondary education. Senior secondary pupils may still have to pay fees, but the level of fees is controlled by the government. In addition, senior secondary pupils in government schools may have to pay modest extra-curricular activity (ECA) fees, while their counterparts in aided schools pay what is known as a subscription fee or 'Tong Fai'. Tuition fees are sent to the government account to help pay teachers' salaries etc., but ECA fees and Tong Fai are retained at the school level. Schools may use the money to top up approved expenses and to purchase non-standard equipment.

Fees are normally paid in 10 instalments, once a month between September and June. In 1991-92, the standard aided Secondary 4 fee was HK$227 per instalment, covering HK$210 tuition fee and HK$17 subscription fee. The fee in government schools was HK$215, including HK$210 for tuition and HK$5 for ECA.

Table 1: Standard Tuition Fees in Government and Aided Schools (HK$ per Instalment)

	Secondary 1-3	Secondary 4 and 5	Secondary 6 and 7
1986-87	free	105	140
1987-88	free	105	140
1988-89	free	105	140
1989-90	free	130 (+23.8%)	170 (+21.4%)
1990-91	free	160 (+23.0%)	215 (+26.5%)
1991-92	free	210 (+31.2%)	255 (+18.6%)

Table 1 shows the increase in tuition fees between 1986-87 and 1991-92. Fees were held constant for the first three years of this period, but then increased. The jumps were substantial in proportional terms, but not in absolute ones. Tables 2 and 3 show comparable data for the subscription and ECA fees.

Table 2: Standard Subscription Fees in Aided Schools (HK$ per Instalment)

	Secondary 1-3	Secondary 4 and 5	Secondary 6 and 7
1986-87	free	8	10
1987-88	free	14 (+75%)	16 (+60%)
1988-89	free	14 (+0%)	16 (+0%)
1989-90	free	15 (+7.1%)	16 (+0%)
1990-91	free	15 (+0%)	16 (+0%)
1991-92	free	17 (+13.3%)	17 (+6.2%)

Table 3: Standard ECA Fee in Government Schools (HK$ per Instalment)

	Secondary 1-3	Secondary 4 and 5	Secondary 6 and 7
1986-87	free	2	2
1987-88	free	2 (+0%)	2 (+0%)
1988-89	free	3.5 (+75%)	3.5 (+75%)
1989-90	free	5 (+43%)	5 (+43%)
1990-91	free	5 (+0%)	5 (+0%)
1991-92	free	5 (+0%)	5 (+0%)

The extra-curricular activity fees charged by the government schools are fixed regardless of school characteristics. The subscription fees are also supposed to be standard, but some diversity is permitted. The Education Department can grant approval to schools to increase subscription fees on the grounds of promoting student welfare e.g. through air-conditioning in classrooms. Table 4 indicates that many grammar schools charge subscription fees substantially higher than the HK$17 standard fee. For example the Jockey Club Ti-I College for gifted children charges HK$72 for senior students and HK$60 for junior students.

Table 4: Subscription Fees in Some Aided Schools, 1991-92 (HK$)

		S1-3	S4/S5	S6/7
Grammar Schools				
1. Methodist College		12*	29*	34*
2. Ying Wah College (Girls)		free	66*	66*
3. Wah Yan College (HK)		free	28*	28*
4. Chiu Chow Association Secondary School		free	17	17
5. TWGHs Li Ka Shing College		free	17	17
6. Diocesan Girls' School		free	22*	22*
7. Kei Yuen College		free	17	17
8. Lock Tao Sec. School (Shatin)		free	17	17
Prevocational/Technical				
1. TIACC Woo Hon Fai Prevocational School		free	17	17
2. Bishop Hall Prevocational School		free	17	17
3. FMO Aberdeen Secondary Tech. School		free	17	17
4. St. Benedict's Secondary Technical School		free	17	17
Special	(type)			
1. Chak Yan Centre School	maladjusted	free	--	--
2. Queen Mary Hospital Red Cross School	hospital sch	free	--	--
3. Yau Tong Morning Hill Sch	MH (mild)	free	--	--
4. Pinehill Village No.3 Sch	MH (mod.)	free	--	--
5. Canossa Sch for the Visually Disabled	blind	free	6	--
6. Mary Rose School	autistic & MH	free	--	--
7. Jockey Club Ti-I College	gifted	60*	72*	72*

* Special approval for increased subscription
-- No operation (class)
MH Mentally handicapped

School fees in the private sector vary tremendously, but are much higher than the government and aided sectors because they are the main source of schools' revenue. In private schools, fees are required at all levels. Some figures are presented in Table 5. Some schools are in the Bought Place Scheme, and therefore provide free or highly subsidised education in Forms 1 to 5. In others, however, the fees are substantial.

Table 5: Fees in some Private Schools, 1991-92 (HK$ per Instalment)

	S1-3	S4/S5	S6/7
With/Without Bought Place Scheme			
1. New Method College	free*	210*	2,004
2. St. Gloria College#	--	--	1,230
3. Wellington College	free*	--	--
4. Chan Shu Kui Memorial School	free*	1,136	1,534
5. The Kiangsu-Chekiang College	free*	210*	300+
Direct Subsidy Scheme (DSS)			
1. Hon Wah Middle School~	100	300	--
2. Pui Kiu Middle School~	100	250	--
3. German Swiss International School+	41,450	41,450	43,700
4. HK International School+	75,200	75,200	82,650
5. French International School+	36,432	36,432	46,239
English-Schools Foundation			
1. King George V School+	40,700	40,700	40,700
Non-DSS International Schools			
1. Hong Kong Japanese School	1,080	--	--

* Bought Place Scheme
\# Matriculation classes only (Arts)
~ Left-wing schools
\+ fees per annum

AN EQUITY PERSPECTIVE

The concept of education as a human right, advocated by the 1948 United Nations Declaration of Human Rights, has had a far-reaching impact on the education policies in most countries. The underlying principle is that everyone should have the right to education since it is a critical component in personal fulfilment and in individual and group social mobility. It is argued that education should be free, at least at the elementary level, so that individuals cannot be denied access to education simply because their families are unable to pay fees (Bray 1988, pp.56-7).

Following this philosophy, individual states in the USA, for example, offer eight to 12 years of free education; and the United Kingdom provides 11 years of free education. Hong Kong, being an

international city and a British colony, is heavily influenced by Western countries and the United Kingdom in particular.

The 1965 White Paper which set universal primary education as an immediate aim stated that "the final aim of any educational policy must always be to provide every child with the best education which he or she is capable of absorbing, at a cost which the parent and the community can afford" (Hong Kong 1965, p.1). At that time, fees in aided and government senior secondary schools were collected at two different rates. Students in rural schools were charged less, on the grounds that rural areas had lower standards of living and that parents would therefore find it more difficult to pay. This differential fee structure was abolished in 1982. However, all families in financial difficulties may apply for fee remission, textbook assistance and travel subsidies. These are summarised in Table 6, and are evidence of the government's efforts to alleviate inequities in the system. Mentally and physically disabled students can apply for additional disability allowances of about HK$600 per month.

Table 6: Disbursement in Government Financial Assistance Schemes (HK$ million)

	Fee Remission	Textbook Assistance	Student Travel Subsidy
1989-90	36.04	19.05	209.31
1990-91	36.68	22.49	236.00
1991-92	60.74	28.49	144.43*

* Estimate

Source: Student Financial Assistance Agency

COULD FEES BE INCREASED?

Traditional economic justifications for government subsidy of education are numerous. They include the large social benefits (externalities) of having a better educated population, and the fact that financial subsidies can be linked to controls on the scale and orientation of education. These factors may be added to the equity considerations noted above.

However, the extent of government assistance is of course

dependent on the size of government revenues and the strength of domestic economies. During the 1970s and 1980s, economic crisis forced many governments to cut the proportions of their budgets devoted to education. One obvious way to maintain education expenditure was to raise more funds by introducing or raising fees.

Rather contrary to conventional wisdom, some analysts have argued that free education may be more inequitable than fee-charging education. Coombs (1985, pp.211-7) has pointed out that the children of high-income families tend to remain in the education system longer than the children of low-income families, and therefore that when all education is heavily subsidised the children of the rich benefit more from the subsidies than the children of the poor. To support this statement, he presented statistics from Latin America reproduced in Table 7. Although the figures refer to the period around 1970, the basic point remains valid.

Table 7: Public Expenditure on Education per Child by Income Groups - A Composite Profile of 19 Latin American Countries

Population by Income Level	% of Total Population	Average Yrs of Schooling	Cumulative Public Expenditure per Pupil (1970 US$)
Low	65	2.47	113
Medium Low	20	8.64	596
Medium High	10	14.25	2,687
High	5	17.00	4,753

Source: Coombs (1985), p.242

Similar points have been made by the World Bank, which has taken arguments one stage further. Thobani, a World Bank officer (1984, p.402), has argued that "within a fixed budget constraint, too low a price can cause the good to be rationed or the equality of service to deteriorate", and that "both phenomena typically tend to hurt the poor more than the rich". This suggests that it is better to charge fees to those who are able to pay them, and to use the money thereby generated to assist the poor. Similar arguments have been presented by Jimenez (1986, 1987) and Tan & Mingat (1992).

While Hong Kong certainly does not face economic crisis

comparable to countries in Africa and the poorer parts of Asia, the government has many claims on its resources and should also pay attention to equity considerations. Pressure on government finance was increased in the early 1990s by the decision to construct the airport at Chek Lap Kok. Within the education sector, pressure has been increased by the scale of tertiary expansion. To help pay for this expansion, fees have already been raised at the tertiary level, and it may be appropriate to review the primary and secondary levels. Concerning the ability and willingness to pay, Ieong's paper in this publication shows that many parents pay substantial sums for kindergarten education. If this is the case, it may be assumed that they could and would also pay for primary and secondary education. Scholarships and fee-remission schemes can be provided to those who need help.

THE SMI AND DSS

The School Management Initiative (SMI) and Direct Subsidy Scheme (DSS) are already two small steps in the direction of increased fee charges. The SMI is a major reform which aims to boost the quality of education and school effectiveness through school-based management and devolution of power (Hong Kong 1991). Partly in connection with the SMI, the Education Department has decided to give schools more flexibility in the ways that they use income from subscription fees (Hong Kong 1992, Annex 6, Section 6).

The DSS also encourages diversity and increased revenue-generation at the school level. The principal features of the scheme, which was launched in 1991, are presented by Tan elsewhere in this publication. The main point here is that DSS schools can enjoy government subsidies but have much greater autonomy than aided schools. In September 1992 there were nine schools in this scheme, of which four were international schools and five were left-wing schools. Aided schools had been invited to join, but none had yet done so.

The DSS is regarded in many quarters with reservation. It has been described as elitist since aided schools joining the scheme would have to charge fees and children of poor families would therefore be excluded (Luk 1990, pp.54-5). One aided school did propose to join the DSS in 1992, though, as noted by Tan, it did not do so. This was St. Paul's College, which has a long history and mainly receives Band 1 students from well-off families. The scheduled tuition fee was

HK$1,400 per instalment. The DSS raises many issues of equity. Of particular significance for the present paper, however, is the fact that the scheme permits schools to charge substantial fees but still to receive government subsidies.

CONCLUSION

In Hong Kong, school fees in the public sector are very low. The government was keen during the 1970s to introduce nine years of compulsory education, and adopted the fashionable view that free provision was a human right.

In recent years the notion of free education as a human right has come under challenge. The World Bank has been among the most prominent challengers, which is particularly significant because the Bank is a United Nations agency. The thrusts of the World Bank have been directed at poor countries, and have thus had little impact in Hong Kong. However, the arguments should perhaps not be dismissed altogether. As noted by Bray's paper in this publication, the Hong Kong government has increased fees in tertiary education. There may be good reasons for increasing fees at primary and secondary levels too. The DSS provides one mechanism to do this, though that scheme has not yet taken off in the way originally envisaged. Other ways to increase charges would be by raising permitted ECA and subscription fees, and by introducing basic tuition charges in aided and government schools. It would not be reasonable to do this without simultaneously providing scholarship and fee-remission schemes, but such schemes could be financed from the fees charged to those who can afford to pay them.

Of course a proposal to reintroduce tuition fees has political implications. Psacharopoulos & Woodhall (1985, p.146) have pointed out that in some countries such a decision might even be politically suicidal. Though Hong Kong does not have an elected government system, it does have direct elections to the Legislative Council, District Boards and Urban Councils. The fee-charging issue with its possible unpopularity at the first instance as in the eyes of consumers could become highly controversial. However, the way the public would respond would depend on the way that the issues were presented. A sound case can be made for tuition fees, and it is not inconceivable that existing policies could be modified or reversed.

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Hong Kong's Small Rural Schools: Issues of Cost and Effectiveness

Au Wong Wai Yin

Overseas visitors to Hong Kong, most of whom have an image of a densely-populated urban metropolis, are often surprised to learn that the territory has a rural periphery with schools that serve fewer than a dozen pupils and have only two or three teachers. These schools have declined in number, but they remain of great importance to their communities and are a significant focus for government policy.

The issues affecting these small schools are not unlike those which confront similar institutions elsewhere. The basic dilemma is between high unit costs and the role of the schools in social development. Questions also arise on the quality of education that the schools can offer. Antagonists argue that the quality is inferior to that in larger schools, but not all analysts agree.

Some countries have witnessed fierce debates on whether small schools should be phased out or retained. Policy issues have also been explored in Hong Kong. The 1981 *White Paper on Primary Education and Pre-primary Services* (Hong Kong 1981, p.17) asserted that "it is recognised that very small schools are by and large educationally inefficient". However, the White Paper gave no evidence for this statement, which could be contested.

Setting out general policies on small rural schools, the White Paper indicated that the government would:

1. close small rural schools with fewer than six operating classes close to large centres of population; but
2. in exceptional cases retain small rural schools, particularly in the more remote parts of the New Territories, which serve specific, compact communities; and
3. form centrally located primary schools by closing and consolidating neighbouring small rural schools.

It is instructive to examine, over a decade after the White Paper was published, the present situation of the schools. In these years of development of huge capital projects, education, like most other public services, has suffered from a tightened budget. Economic factors will play a vital part in determining the future of small rural schools. The study reported here examined the economic, educational and social aspects of a sample of small schools in order to enhance understanding of the operation and role of these institutions, and to identify appropriate future policies. More details on the study and its findings are presented in Au Wong (1992).

DEFINITIONS

Studies of small schools must always begin by defining 'small'. The government of Manitoba in Canada has defined a small primary school as one in which the number of pupils enrolled, divided by the number of grades taught, is less than 15 (Bray 1987, p.15). In contrast, in England Galton & Patrick (1990, p.1) defined small schools as "those which typically have not more than 100 pupils covering the age range 5-11 and not more than four teachers including the head". For this study, primary schools were considered small if they had three or fewer operating classes. In these institutions the number of teachers (including the head) ranges from four to one and a half. Most of these schools use combined classes or multigrade teaching.

It is also necessary here to define 'cost' and 'effectiveness'. Cost is defined as per-pupil cost, which includes the cost to the government plus other monetary and non-monetary cost to parents, students and communities. The concept of effectiveness includes the educational outcomes and the social roles of the schools. It is difficult to measure accurately all costs and effects, but it is still possible to chart rough dimensions and to make some judgements on the implications of current patterns and policies.

THE INTERNATIONAL LITERATURE

Economic Factors

Small schools have been widely considered less cost-effective than large schools because they lack economies of scale. However, several

studies (e.g. Cummings 1971; Gilder 1979; Curry & West 1981) have challenged this notion. A 1984 study of 85 schools with enrolments between 8 and 457 in Scotland showed that unit costs could vary greatly for schools of similar size (Bell & Sigsworth 1987, p.185). Another study compared unit costs of schools with enrolments between 9 and 928 in 116 schools in New South Wales, Australia (Hind 1977). The study found economies of scale with increased school size. However, most economies in administration and instruction were exhausted by the 100 pupil level, and in maintenance by the 200 pupil level. Diseconomies occurred when enrolment reached 600 because of the larger labour components.

Of course other costs, including non-financial ones, should also be considered. Bray (1987, p.23) noted that consolidation of small schools into larger central institutions could require pupils to travel long distances each day. In this case, at least five costs are involved:

- the actual expenditure on their transport (which is in fact relatively easy to work out in money terms),
- the cost of children's tiredness, which is both a problem in itself and may reduce the effectiveness with which they learn,
- the cost of a narrower curriculum if the school cannot organise extra activities because children must leave school as soon as the day is over,
- the cost of the children's time spent on travelling, and
- if parents drive the children to school in a private car, the cost of the parents' time and tiredness.

Further, Nash (1976) has pointed out that some education-related services are seldom demanded by students of small rural schools, particularly services on care, probation and guidance. These incidental costs, associated with large schools but rarely or never incurred by village schools, could become costs of closing small schools and forming large ones.

In summary, the economics of small versus large schools are not quite as clear as they might appear at first sight. Economies and diseconomies of size do exist with respect to certain costs, but it is not clear whether savings can be realized from consolidation of schools, due to the existence of extra pupil transport costs resulting from consolidation and the extra costs that may be associated with large, less-personal institutions. Also, wide variation exists between the costs of specific institutions, so individual schools do not always fit the general pattern.

Educational Factors

Small rural schools, besides being accused of fiscal inefficiency, are confronted with allegations of educational ineffectiveness. Educational factors relate to curriculum, teachers, climate and students. There are two opposing points of view on the educational advantages and disadvantages of small schools. The first is that greater curriculum opportunities are denied to the children in such schools because the small number of staff restricts the specialisms available within any one school. This problem is felt particularly in such areas as music, physical education and science. On the other hand small classes provide more individual attention and a stronger family atmosphere.

Breadth of curriculum is not as critical in primary schools as in secondary schools, since one teacher in one classroom should be able to offer most of the options required. In England, teachers of elementary level children take most lessons on their own. This contrasts with the situation of Hong Kong, where specialisation is emphasised and subjects are taught by different teachers. However, the Hong Kong pattern is not necessarily the best.

Multigrade teaching is one of the characteristics of small rural schools. There is a belief that students in small rural schools might suffer academic and social deficiency as a result of split-grade classes, which makes it necessary for the same teacher to teach different grades in the same class. Results of research on multigrade schooling have been mixed. Milburn (1981), Young & Reich (1974) and Papay et al. (1975) found no significant differences in achievement of multigrade and single-grade children. However, they did find significant differences in affective development. Children in small schools had better self-concepts, better attitudes towards school, greater happiness and satisfaction, better social adjustment in vertical groups, and less anxiety. The UK Plowden Report (1967) observed that the mixed-age classes in small village schools were beneficial not only to younger children but also to the older ones who coached and looked after their juniors.

More negative is the danger of personal clashes between teachers and pupils. Although an excellent teacher could have a very strong and positive role, the impact of a poor teacher could be much greater in a small than in a large school (Marshall 1985, p.13). However, the negative aspects can be reduced by careful monitoring by the authorities, and it has been pointed out by various researchers that in general there is no direct relationship between academic achievement and school size. Moreover Barker & Gump (1964)

noted that in small schools the proportion of students who could participate in activities, the quality of that involvement, and the satisfaction with that involvement clearly favoured small schools over large ones. Children benefit in socialization as well as in learning skills, and small schools can take advantage of a more natural family atmosphere.

Social Factors

A distinctive feature of small rural schools is the close social interaction with their communities. The traditional relationship between the school and community has some positive effect on students. Midwinter (1972) maintained that within the interrelation of school and community, children could effectively develop social attitudes. He regarded this as:

> the main educational reason for schools establishing positive and compelling connections with the community. By involving the school strongly in its social context, the development of skills and their exercise in relevant content is afforded the fullest possible scope.

From the viewpoint of educational development, social involvement is part of the development of civic education and the awareness of environment and responsibilities. McLaughlin (1982, p.283) stressed after evaluation of a range of rural education projects that "the success of rural school improvement programmes depends on how well they fit local community needs as well as local educational needs".

The smallness of rural schools is usually due to the decline in population in the area. However, in some cases the decline in population has been accelerated by threatened closure of schools. One document in England (quoted in Bell & Sigsworth 1987, p.205) claimed that the loss of village school from closure "can deter people from remaining in or moving into rural areas, thereby accelerating the process of population decline". Similar factors might be expected to operate in Hong Kong.

RESEARCH METHODS AND SAMPLE

The research reported here was based on three existing small rural schools, one closed school, and two central schools (Table 1). Data were collected mainly through interviews, and supplemented by information from the government's Education Department on the standard and actual cost of aided primary schools.

Table 1: Schools in the Sample

School	Classes	Rooms	Interviewees
A	1	1	the headteacher one teacher (all) seven students (all) three parents/local residents
B	2	3	the headteacher two teachers (all) 10 students (all) three parents/local residents
C	3	2	the headteacher two teachers 25 students (all) two parents/local residents
D	closed	3	the last headteacher (who was also a local resident)
E	12	12	the headteacher and two teachers who had small school experience two parents/local residents
F	37	24	one headteacher, three teachers and 14 students who had small school experience four parents/local residents

Note: Schools A-C were small rural schools, School D was a closed rural school, and Schools E and F were central schools.

As the number of schools in the sample was limited, attempts to generalise must be cautious. However, although each school has its own environment and distinctive features, there appears to have been commonality with small schools in other countries. This encouraged the researcher to feel that there were some generalisable findings.

The small schools in the sample each had one to three classrooms and no special rooms. All were established over 30 years ago, when there was a substantial population in the rural areas. Table 2 shows the trend of declining enrolment of these schools.

Table 2: Number of Operating Classes and Enrolments, 1981-91

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
School A	2(20)	2(21)	2(18)	2(12)	2(10)	2(9)	1(8)*	1(8)*	2(7)#	1(7)*	1(7)*
School B	5(72)	5(54)	5(55)	5(40)	4(37)	3(33)*	3(26)*	3(23)*	3(20)*	2(16)*	2(10)*
School C	4(87)	4(77)	3(74)	3(74)	3(65)	3(54)	3(48)	3(39)	3(35)	3(30)	3(25)

( ) enrolments
* whole-day operation
\# reverted to bisessional operation since there were more than 4 levels.

FINDINGS

Economic Features

Table 3 shows the items included in the Standard Cost Estimation for calculation of the unit costs of the three small rural schools, the two central schools, and the aided primary school sector as a whole. Both standard and actual costs are recurrent. Neither includes the capital costs of building, furnishing and equipping new aided primary schools. In 1989, the average building cost of a 30-classroom standard design primary school was estimated at HK$31,000,000, and the cost of fully

Table 3: Items included in the Standard Cost Estimation

1. Teaching staff salaries and provident fund
2. Non-teaching staff salaries and provident fund
3. Major repairs
4. Furniture and equipment
5. Rent and rates
6. Insurance expenses
7. Passage and baggage allowance
8. Other school-based and class-based expenses

furnishing and equipping one was approximately HK$800,000. If these costs of establishing a new central school by closing small rural schools are considered, the unit cost in the central schools should be adjusted upwards. Again this adjustment is not considered in the comparison.

On this basis, the unit recurrent costs of the three small rural schools, the two central schools, and aided primary schools as a whole are summarised in Table 4. There is a great difference in the unit recurrent costs among the schools. The highest unit cost of HK$78,787 was in the smallest school which had only seven pupils per class. The lowest unit cost of HK$6,647 was in the largest school, which had 36 pupils per class. In general, high unit cost was associated with low enrolment and small school size.

Table 4: Cost-Related Items of the Individual Schools in 1990-91 (HK$)

Items	School A	School B	School C	School E	School F	All Aided Primary Schools*
(a) Total actual cost	551,509	695,855	893,396	3,318,128	4,818,744	3,637m
- Salaries	531,050	666,798	876,751	3,098,530	4,696,892	-
- School and Class Grant	20,459	29,057	16,645	74,698	121,852	-
- Others	-	-	-	144,900@	#	
(b) Enrolment (average)	7	18	31	389	725	437,590
(c) Unit Cost (a) / (b)	78,787	38,659	28,819	8,530	6,647	8,311
(d) Teacher to Pupil Ratio	2:7	3:18	4:31	16:389	25:725	16193: 441908
(1 : x)	1:3.5	1:6	1:7.75	1:24.31	1:29	1:27
(e) Average Class Size	5	7	10	32	36	35

Note: All cost figures refer to the accounting year i.e. 1 April 1990 to 31 March 1991

* excluding ESF and special schools
@ including major repairs, rent and rates
\# school bus cost of HK$148,961 paid by District Office not included

Table 4 also shows that staff salaries accounted for 93 to 98 per cent of the total recurrent cost of the schools. As a result, the teacher:pupil ratio was the decisive factor in the determination of the unit cost.

The actual unit costs of the three small rural schools, at HK$78,787, HK$38,659 and HK$28,819, were respectively 848, 365 and 247 per cent above the HK$8,311 average for all aided primary schools. These figures not only indicated that the small schools had higher costs, but also that the cost decreased with rising enrolment. As for the two central schools, the actual unit cost of one was similar to, and the other, due to higher enrolment per class, was 20 per cent below the average.

However, other costs should not be overlooked. For example, many students from the closed small schools were bussed to the central schools, and their fares were subsidised by the District Office for the first five years. In one central school, the subsidy for the school bus service in 1990-91 was HK$148,961 for 110 students. Time spent travelling to and from the central schools should also be considered. Some students travelled 45 minutes each way by bus to the central schools, whereas if their village schools had been kept open they would only have needed a few minutes' walk. For a primary school pupil, travel by bus for one and a half hours each day could be a fatiguing routine. The costs of time and tiredness of the students and sometimes the parents could not be measured easily in monetary terms, but they do constitute part of the cost of closing and consolidating small schools.

Educational Features

All teachers in the small rural schools visited were over 30 years old. Among the nine teachers, one was a temporary teacher who had retired from another aided primary school. Table 5 shows that all except one teacher had over 15 years' teaching experience. Also, all the teachers had about five years' teaching experience in larger schools.

Eight of the nine (89%) teachers in the three small rural schools possessed teachers' certificates, which compared well with the 91 per cent average in all aided primary schools. In contrast to the majority of teachers, however, was that all their certificates were for part-time in-service training, ranging from one to three years in duration.

Table 5: Age and Experience of Teachers

	School A	School B	School C
Age Range			
21 - 30	-	-	-
31 - 40	1	1	2
41 - 50	-	1	1
51 - 60	1	-	1
61 - 65	-	1	-
Teaching experience			
5 years or less	-	-	-
6 - 10 years	-	1	-
11 - 15 years	-	-	-
16 - 20 years	1	-	2
21 - 25 years	-	1	-
26 - 30 years	1	-	1
over 30 years	-	1	1

Teachers in two of the three small schools possessed a range of expertise e.g. in English, Chinese, Mathematics, Art & Craft and other minor subjects. However only one school had a teacher qualified in physical education, and another had a teacher who had attended a course in music but who still felt uncomfortable with the subject.

Mobility of the teachers in the small schools was very low compared to that of teachers in the central schools and other aided primary schools. The teachers were certainly not discouraged by the remoteness of the schools. Nor was the allowance for teaching in the remote schools an important factor encouraging them to stay. Rather, they indicated that they liked the happy learning environment of these small rural schools, and treasured the good relationships among colleagues and students.

The low mobility of the full-time teachers did not, however, mean that there was no recruitment difficulty. According to the headteachers, it was quite difficult to recruit substitute teachers when ordinary staff were on sick leave or attending courses. This may have been partly because of the location of the schools. As a result, the teachers usually attended only courses that lasted for a few days or were held during school holidays. In the central schools, arrangement for teachers to attend courses was easier. First, there were more

serving teachers to cover for their colleagues, and second, the schools were much more accessible.

The results of the Secondary School Places Allocation (SSPA) in the past five years, shown in Table 6, indicated that while the performance of the smallest school had been consistently unsatisfactory, pupils from the other two rural schools had fared quite well. The percentages of pupils in Bands One to Three in these two schools during the past five years were generally above those of the central schools and the territory as a whole. Standard norms prescribed per band 20 per cent of the total primary six pupils in each district net. Of course, such figures do not speak the whole truth about the academic standards of the small rural schools. For one thing, the students were not assessed before they entered these schools. Nevertheless, the figures do show that students from small rural schools can attain good academic standards and are not necessarily academically inferior to their counterparts in larger schools.

The curriculum in the small schools was not much different from that in large schools. Sometimes, there was a little departure from the schedule when the occasion demanded it. In upper classes, more time was spent on Chinese, Mathematics and English, but this was also true in other primary schools where upper classes were more examination oriented. As for the lower levels, more flexibility in time, teaching methods and activities was allowed.

However, the frequency and variety of activities outside the classrooms were more limited than those of large schools, which had bigger teams of teachers staff and larger pools of students. Because of the limited number of teachers and pupils, most special activities were confined to particular occasions such as Christmas and after the examinations. Also, the small rural schools lacked some common instructional resources such as pianos, loop systems, science equipment, personal computers, typewriters and duplicating machines which are standard features in larger schools.

The small schools had multigrade classes, integrating two to four levels, with each level grouped according to pupils' achievement. Six out of nine teachers had taken short training courses on combined-class teaching organised by the Advisory Inspectorate of the Education Department. Most teachers used both conventional and activity methods of teaching.

To identify the teachers' perceptions of their environments, 16 staff were interviewed. Of the 16, eight were in small schools and eight were in central schools, and all had teaching experience in both

Table 6: SSPA Results of the Small Schools and the Central Schools

		Bands					
		1	2	3	4	5	Total
School A	1990/91	0	1	0	0	1	2
	1989/90	0	0	0	0	2	2
	1988/89	0	0	0	0	0	0
	1987/88	0	0	0	0	2	2
	1986/87	0	0	0	0	2	2
School B	1990/91	3	0	1	1	0	5
	1989/90	0	1	3	0	1	5
	1988/89	2	2	1	1	0	6
	1987/88	1	2	0	0	0	3
	1986/87	4	1	0	2	0	7
School C	1990/91	1	2	2	1	1	7
	1989/90	2	1	3	1	0	7
	1988/89	1	1	3	1	1	7
	1987/88	2	1	2	2	3	10
	1986/87	0	1	2	2	4	9
School E	1990/91	4	7	9	13	26	59
	1989/90	2	11	9	17	13	52
	1988/89*	-	-	-	-	-	-
	1987/88	2	8	8	20	12	50
	1986/87	7	12	9	7	6	41
School F	1990/91	14	12	21	15	24	86
	1989/90	3	4	9	10	13	39

* figures missing

small and large schools. The majority of these teachers considered large schools superior in the availability of instructional resources and opportunity for extra-curricular and sports activities. This was to be expected, as the educational policy gave priority to large schools on resource allocation, and large schools had a greater pool of students. Concerning classroom management, discipline and interpersonal relations, small schools were clearly favoured. The 16 teachers all felt

that in small schools it was easier to get to know pupils personally. On balance, the teachers thought that the working conditions were similar in schools of either size. In the areas of grouping and individual differences, the results were not so clear but showed some inclination towards the small schools.

The study also investigated students' perceptions. The students' questionnaire was designed to assess the social learning climate and opinions about the schools. Scores by students of small schools and central schools were analysed separately. The means and standard deviations of five variables of the two groups of students are shown in Table 7.

Table 7: Social Climate Scores of 39 Students from Three Small School Classrooms and 14 Students from One Central School Classroom

Variables	Small School Classrooms		Central School Classroom		Difference between Means
	Mean	S.D.	Mean	S.D.	
Satisfaction	11.79	2.45	10.00	2.24	1.79*
Friction	7.42	2.98	8.54	2.60	-1.12
Cohesiveness	10.11	3.33	9.07	2.97	1.04
Competition	10.79	3.08	10.57	2.12	0.22
Difficulty	8.81	2.67	8.92	3.38	-0.11

* A t-test for independent samples showed this difference significant at the 0.05 level.

Since the possible range of scores for each variable was 0 to 16, 8.0 should be considered a neutral score for each variable. On this basis, it could be said that satisfaction, cohesiveness and competition were high in the small rural school classrooms. Friction was somewhat below the mid-point, and difficulty was near the mid-point. Students in central schools who had had learning experience in both small schools and large schools were requested to answer the same questionnaire. According to them, satisfaction, cohesiveness and competition were high in the central school, while friction and difficulty were just above the mid-point.

Social Features

Visits to the villages where the small rural schools were located showed that the small schools were usually major centres of activity, particularly during traditional festivals. In most cases villagers had opposed consolidation of small rural schools on the ground that every community needed its own school as a centre for education and social development. The removal of the only school in the village, it was commonly argued, would reduce communication and contact among the villagers.

In Hong Kong, the importance of a small rural school to its community depends very much on the geographic location of the village. The one-class school, located not far from other villages where more activities could be found, played a relatively unimportant social role in the community. In contrast, the other two small schools, located in the outlying small islands, still had a significant role in promoting social interaction and integration. Demographic changes in these villages did erode the traditionally strong tie of the schools with the communities they served. A declining population meant fewer activities in the villages and therefore less involvement and participation by the schools.

In summary, the social role of a small school depended very much on the particular circumstances of the community which the school sought to serve. With a declining population, the traditional role of the small rural school in fostering social cohesiveness among the villagers has been slowly diminishing, and with that the disappearing affection of the community for the school.

CONCLUSIONS

The debate about small rural schools has focused primarily on the interplay of economic, educational and social factors. In this concluding section, the strengths and weaknesses of Hong Kong's small schools are compared with those of other countries.

Most small schools are able to operate with good internal communications and few formal rules. The environment allows greater flexibility in taking action and making decisions. A wider range of duties on the part of teachers, considered as a structural constraint by Galton & Patrick (1990), could also be a positive factor. More participation by teachers encourages a strong sense of belonging and team spirit, and should be considered an asset of small

schools. The findings of this study echoed those of others. Students of the small schools appreciated the frequent and individual attention given by teachers, and the students in central schools who had previously been in small schools noted the loss of this relationship in the larger institutions. The teachers in small schools also had close working relationships. This was one reason given by the teachers for remaining in the small schools.

The study indicated that students from the small schools had greater opportunity to be involved in classroom and school activities. This finding supported that of Barker & Gump (1984) in the USA and Burstall (1974) in the UK.

All teachers interviewed said that there were very few discipline problems. Carmichael (1980) pointed out that the sense of identity a student experienced in a smaller school might help explain this rather common characteristic among small rural schools. Not only were the students individually well-behaved, but the relation among their peer groups was also commended by the Hong Kong teachers. These findings echoed Bell & Sigsworth's (1987, p.115) observation that children's relationships in small rural schools are more extensive in terms of mixed-age and cross-sex relationships.

The data obtained from the questionnaire on the cost of the three small schools and the two central schools confirmed the findings of most other studies on the high unit costs of small schools. Only recurrent costs were used for the calculation of per-pupil cost. The higher costs in the small schools chiefly resulted from lower pupil: teacher ratios. However, the study did not calculate in detail the costs of students' travel, which were presumably much lower in the small schools than in the central school.

The study also omitted calculation of capital costs and expenditure on teaching aids. Hopkins & Ellis (1991) pointed out with reference to the UK that the level of resources was one of the factors that affected the effectiveness of a small school. The lack of facilities, they argued, caused inconvenience to school administration and teaching, and diminished the chance of students receiving good exposure to a variety of learning materials. However, the lack of resources did not necessarily mean that teaching would be poorer. A good team of staff could compensate to a great extent for the drawbacks due to lack of modern equipment.

The problem of staff-turnover and the difficulty of attracting and retaining teachers of small rural schools, found in overseas studies such as Berliner et al. (1989), Rios (1987) and Swift (1984), did not appear in the small schools in this study. However, observations

during school visits showed that the small number of teachers, ranging from two to four, made the sampled small rural schools more vulnerable to luck in the posting of teachers. This matched the findings by Marshall (1985) and others on the more important role of teachers of small rural schools. A weak teacher could adversely affect the entire class and even the whole school because of its smallness. In contrast, large schools were less vulnerable to the impact of one or two weak teachers.

Further, although most teachers in the small schools had received training, they seldom attended the in-service courses tailored for particular subjects or purposes. It was therefore found that, despite occasional employment of individual and small group activities, few lessons were conducted in a way relevant to the multigrade class environment. To some extent a parallel again exists with other countries. With reference to the UK, for example, Hopkins & Ellis (1991) point out that teachers in small schools are often isolated. However, in Hong Kong the lack of opportunities is not serious. Although teachers in Hong Kong's small schools have few colleagues, the schools are not remote compared to those in parts of Scotland and elsewhere.

Turning to academic achievement, the data in this study strongly agreed with the work of Milburn (1981) which found no evidence that children in small schools did less well than those in large schools on basic measures of attainment. The SSPA results of students of two small schools were generally above those of the large schools and the average of the aided primary schools. This casts doubt on the assertion of the 1981 White Paper, quoted at the beginning of this chapter, that "very small schools are by and large educationally inefficient". Nevertheless, the study also recognised that all the strengths of small schools remain only potential unless dedicated teachers and enlightened administrators combine to turn them into realities. Small schools, like other schools, need support to achieve their goals.

Thus, small rural schools in Hong Kong, like ones in any culture, have their strengths to be appraised and weaknesses awaiting further remedy. However, unlike most rural schools in other countries, the location of many of these schools in Hong Kong might not be considered isolated any more as a result of the rapid growth and development of the New Territories and some outlying islands. The most common factors that contributed to the low enrolment in these small rural schools were the lack of facilities as compared with larger schools and a declining population of the villages. But the first factor

could be rectified and the second factor reversed. In fact, the future of these small rural schools depends very much on government policy.

Finally, Schumacher's (1973) belief expressed in his book *Small is Beautiful* is surely relevant in the small-schools debate. The human factor, which tends to be obscured in the quest for efficiency and economy, ought to deserve more weight and respect in planning and development.

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The Independent Schools Scheme in Singapore and the Direct Subsidy Scheme in Hong Kong:

A Comparison of Two Privatisation Initiatives

Jason Tan

Singapore and Hong Kong are both newly industrialised societies which have enjoyed almost uninterrupted economic growth since the early 1970s. Their historical legacies and cultural backgrounds also have much in common.

In the late 1980s, the governments of both Singapore and Hong Kong embarked on privatisation initiatives in their secondary school sectors. The project in Singapore is called the Independent Schools Scheme (ISS), and that in Hong Kong is called the Direct Subsidy Scheme (DSS). This paper examines the development, rationale and implementation of these schemes. First, the issue of school privatisation is viewed in a comparative perspective. Next, the background of events leading up to the introduction of the schemes is described. This is followed by an examination of some key features of the schemes. While the schemes share certain aims, there are differences due in part to the different socio-political contexts. The paper also examines the reasons why the response from the targeted groups of schools has differed.

The discussion adds to the existing literature on school privatisation, and on the ways in which such initiatives are influenced by larger socio-political environments. While educational privatisation efforts in such countries as the USA and the UK have been largely motivated by economic recession, similar efforts in Singapore and Hong Kong are taking place against the backdrop of steady government surpluses. Other instructive comparisons and contrasts are also identified in the paper.

SCHOOL PRIVATISATION: A COMPARATIVE PERSPECTIVE

Education has come to be viewed in many countries as an economically and socially productive investment in human capital (Fagerlind & Saha 1989; Psacharopoulos et al. 1986). As a result, public educational budgets increased dramatically worldwide between 1960 and 1975 (Coombs 1985). However, adverse economic conditions and competition from other sectors for public funds have slowed the growth of government expenditure on education.

The crisis affecting public financing of education has caused many governments to transfer a larger share of the costs of education to the users through privatisation (Lewin 1986; Orivel 1986). However, the meaning of privatisation in the current literature is not always clear. Pring (1986) identifies two main forms of privatisation: having to purchase at private expense services within the public sector, and encouraging and enabling people to shift their support from the maintained sector to private schools. James (1988, p.98) adds that many 'private' schools are heavily funded and regulated by the state. She observes that:

> 'Source of funding' and 'degree of decision-making authority' may ... yield different public-private categories, and many mixed rather than polar cases.

Advocates of privatisation commonly highlight the benefits of diversity and parental choice. They assert that privatisation improves school efficiency and managerial accountability as a result of increased competition among schools, and that it increases mobilisation of resources from families and other community sources. However, critics claim that privatisation leads to a deterioration of the public sector and increased social inequities, with private schools becoming the preserve of the wealthy elite. They also decry the gradual erosion of government commitment to a common education service for all students (James 1984; Witte 1992).

Bondi (1991) sees four interlinked themes in political arguments for choice and diversity in education in the US and UK: (i) an examination of the appropriate boundary between state provision and individual responsibility, with a marked shift towards the latter; (ii) a questioning of bureaucratic methods of decision-making and resource allocation, and the championing of market or quasi-market mechanisms; (iii) the displacing of equity considerations by notions of excellence; and (iv) the replacement of the principle of uniform

provision with a commitment to diversity in education. These themes provide a useful framework for the present study.

PRIVATISATION IN SINGAPORE AND HONG KONG

The Independent Schools Scheme in Singapore

To understand the background to the ISS, it is necessary to begin with the 1957 Education Ordinance. This document required registration of schools, managers and teachers, and set out the roles and responsibilities of school management committees. Accompanying regulations gave government and aided schools equal funding, and regulated fees, staff qualifications, recruitment and salaries (Singapore 1957). The changes were part of a move towards a highly centralised education system. Over the next decade further steps included the standardisation of syllabuses and educational structures, and the institution of common terminal examinations (Yip et al. 1990). The government has played a dominant role in educational provision since the 1960s, and the private sector has been negligible. At the time of introduction of the ISS in 1987, the percentage distribution of secondary school enrolment in government, aided and private schools was 74.1, 25.7 and 0.2 respectively (Singapore 1991a, p.25).

By the mid-1980s, the tide of centralisation had begun to turn. In 1985 the First Deputy Prime Minister spoke of the need to allow schools more autonomy. He asserted that because of centralised control, prestigious schools had lost some of their individuality and special character. He argued that principals should have the right to appoint staff, devise school curricula and choose textbooks, provided that they conformed to national education policies such as bilingualism, moral education and common examinations (*Straits Times*, 30 May 1985).

This sentiment was echoed the following year by the Minister of Education, who asserted that creativity and innovation in Singapore schools required greater scope for the initiative of principals and teachers. Prime Minister Lee Kuan Yew lent his support to the idea. He saw the dependence on the government for educational provision as tending to stifle competition between schools. Lee believed that competition for students would lead to better schools: "If any school goes down in quality, parents and students will not go to that school. Then the principal will be changed and the school reorganized" (*Straits Times*, 16 August 1989).

In 1986, 12 school principals accompanied the Education Minister on a tour to study the management of 25 "acknowledged successful schools" in the US and UK. The principals' report recommended that selected schools should be given greater autonomy. Such schools, it was argued, would stimulate educational innovation and guide the Ministry on what areas of management could be delegated to principals and teachers to enable the schools to respond more promptly and sensitively to the needs and aspirations of pupils and parents (Singapore 1987, p.ix).

Accepting the recommendations, the Minister cited a study by two American researchers, John Chubb and Terry Moe, who had concluded that American public schools performed less well than private schools because they were sheltered from market forces. The researchers considered private schools more responsive to students' and parents' needs. The Minister therefore favoured grant of independence to a few institutions. Schools with the prerequisites for independence would be well-established and have capable principals, experienced teachers, strong alumni and responsible governing boards. These schools would be given autonomy in staff deployment, salaries, finance, management and curriculum, and would serve as role models to improve Singapore's education system. They would also help set the market value for good principals and teachers by recruiting staff in a competitive market.

At the same time, the government allowed all government and aided school principals greater autonomy in school management as part of the official quest for educational excellence. These moves in school management must be viewed against the background of increasing government concern over the role of education in Singapore's economic growth. The government in 1984 unveiled its vision of Singapore in 1999 as a "city of excellence" and "an innovative society, a society with ideas" (Chong 1985, pp.310-1). This theme gained greater urgency during the 1985-86 economic recession. An Economic Committee recommended, among other things, the education of all individuals to their maximum potential, and the development of creativity and flexibility in order to maintain Singapore's international competitiveness (Singapore 1986). The government intends to develop the independent schools into outstanding institutions to provide the "most promising and able students an education matching their promise" (*Straits Times*, 7 January 1992). The ISS attempts to nurture an elite group of students in preparation for future leadership roles, and is consistent with the well-entrenched elitist philosophy of the government (Milne & Mauzy 1990).

The ISS is also part of an attempt by the government to corporatise social services (Low 1991). The policy aims to lessen government subsidies and to make Singaporeans more self-reliant while giving them wider choices (*Straits Times*, 19 August 1986; Vasil 1992). The government has avoided using the term 'privatisation' with its connotations of 'profit-making'. The official position is that the government will continue to subsidise basic education, but that the cost of high quality education will be borne by the public (Low, Toh & Soon 1991). This policy has been introduced despite the fact that the government enjoys healthy budget surpluses.

The Direct Subsidy Scheme in Hong Kong

As in Singapore, the Hong Kong government keeps firm control over schools through the Education Ordinance and the Code of Aid. Regulations govern the registration of school management committees, supervisors and teachers, and detailed requirements control such matters as textbooks, school holidays, and use of school premises (Hong Kong 1971, 1984). However, Hong Kong differs from Singapore in the relatively modest extent of direct government provision in the education system.

Under the Assisted Place Scheme which was introduced in 1960, selected students were offered awards in private secondary schools in order to meet the shortfall of provision in government and aided secondary schools. This scheme catered for students "whose order of merit comes after those who are allocated places in government and aided schools" (Marsh & Sampson 1963, p.32). The 1965 White Paper on Education recommended increased assistance for private non-profit-making schools, in order to help meet the target of subsidised secondary education for 15 to 20 per cent of all primary school leavers.

Private sector provision was again heavily utilised in the 1970s when the government launched its policy of nine years' free and compulsory education. Under the Bought Place Scheme (BPS), the government paid the tuition fees of students who had been sent to private schools because of the lack of public sector places. At the time when its compulsory education targets were fulfilled in 1978/79, 55.6 per cent of Form 1 pupils were in BPS places. The corresponding percentage breakdown of total secondary school enrolment in government, aided and private sectors was 5.7, 33.3 and 61.0 per cent (Hong Kong Education Department 1979, p.45).

While the BPS saved the government the capital costs of new schools, and allowed it some flexibility in targeting provision, BPS students received subsidies far below that of their counterparts in government and aided schools. Many BPS students, who were at the bottom of the ability rankings, had to endure inferior teaching standards and physical facilities. Moreover, the fact that the BPS fees were controlled imposed strict constraints on the schools' ability to upgrade their standards (Llewellyn 1982). The government accelerated its school building programme to increase public sector provision and phase out less satisfactory BPS places (Hong Kong 1981). At the same time, it started a scheme to convert all non-profit-making private schools to fully subsidised status (Hong Kong 1979). These moves reduced the private sector share of secondary school enrolment to 21.6 per cent in 1988/89, while the aided sector share increased substantially to 70.3 per cent (Hong Kong Education Department 1989, Table 9).

In 1988, the Education Commission highlighted defects in the BPS and recommended changes in private school provision. It affirmed the need for private schools in Hong Kong's "pluralistic society", and stressed the need to recognise "the educational benefits of a strong, independent private sector" (Education Commission 1988, p.53). However, it stopped short of specifying what these benefits were. The report also recommended that the BPS be phased out by 2000, and that existing BPS schools be assisted to upgrade themselves to attain similar standards to those in aided schools.

The Commission proposed a Direct Subsidy Scheme for private schools of a sufficiently high educational standard. The long-term target was for the entire subsidised private school sector to be subsumed in the DSS by 2000. This would encourage the growth of a strong private school sector, while allowing schools autonomy in curricula, fees and entrance requirements. Some Education Commission members visited Singapore to study the ISS (*Ming Pao*, 3 March 1989). However, the findings of the study team were not made public.

Some Comparisons and Contrasts

In both Singapore and Hong Kong, the school privatisation efforts were entirely initiated by the respective governments, with the schools merely playing a participatory role. Also, both the ISS and the DSS were launched against the backdrop of increasing corporatisation of government services. In Hong Kong, this took the form of a Public

Sector Reform programme, which aimed to reduce government commitment to social services and to pass a larger share of operating costs to the public (Cheung 1991). Furthermore, both the ISS and DSS are part of the respective governments' plans to increase school autonomy. In Hong Kong, this takes the form of the School Management Initiative launched in 1991 (Hong Kong Education & Manpower Branch 1991).

However, there are also significant differences. In contrast to Singapore, the Hong Kong government has not widely publicised private schooling initiatives in other countries in order to convince the public of the benefits of the DSS. Also, the DSS schools are not being used specifically as models for other schools to emulate. Third, the Hong Kong government does not explicitly advocate creativity and innovation through the DSS in order to enhance economic growth. Nor have the DSS schools been presented as catering specifically for the needs of a future elite. Finally, the targeted groups of schools are different: the DSS is open to existing private schools, international schools and aided schools, but not to government schools, whereas the ISS is confined to government and aided schools.

To understand these and other differences, it is important to note Hong Kong's socio-political context, and in particular the impending return of Hong Kong to China in 1997 which has created great anxiety in sections of the population. The stream of emigrants in the 1970s and 1980s was accelerated by events in Beijing's Tiananmen Square. The Hong Kong government stand is that by subsidising part of the cost of education in international schools, Hong Kong emigrants might be attracted back to Hong Kong (*Ming Pao*, 3 March 1989; *South China Morning Post*, 6 October 1989). Some observers see the DSS as an attempt to safeguard against centralised manipulation of the education system by the post-1997 government (*Sing Tao Jih Pao*, 31 May 1988; Bray 1992). Incorporation of international schools in the DSS may also be an attempt to maintain foreign models of schooling beyond 1997.

However, in both Singapore and Hong Kong, the public justification was in the language of market economics. The independent schools, it was argued, would provide a genuine alternative to the public sector, and increase parental choice. Market forces, said the Hong Kong Education Commission (1988, p.55) would ensure that the schools offered "good value for money". The designers of the DSS also aspired to save the government the cost of building new schools. The government defended its commitment to free compulsory education and said that no parents would be forced to enrol

their children in DSS schools. This echoed the Singapore government's commitment to maintain subsidised basic education.

OPERATIONAL FRAMEWORK OF THE ISS AND DSS

The Independent Schools Scheme

The principals of independent schools, in consultation with the school governing boards, enjoy autonomy in certain important areas of school management. These include financial policies, budgets, curriculum, pupil enrolment, and staff recruitment and deployment. However, the Ministry of Education still exerts considerable authority through the School Boards (Incorporation) Act. Under the Act, the Education Minister draws up, and has the power to vary or revoke, governing board constitutions. The independent schools are also still subject to the Education Act and Grant-in-Aid Regulations, except in the areas specifically covered by the School Boards (Incorporation) Act (Singapore 1991b).

Each independent school receives an annual per capita grant equivalent to the recurrent cost of education in other government and aided schools. The government also subsidises up to 80 per cent of independent schools' building funds. This is 10 per cent less than its existing subsidies for new aided schools. In addition, the government will match every dollar the schools raise, up to the first million, for their S$10 million tax-free endowment funds used mainly to help needy students. The schools are free to allocate their funds, but must submit annual audited accounts (Tan 1993).

Each individual school decides its own fees. Independent school fees have increased dramatically, and in 1993 ranged from S$70 to S$200 a month, compared with a minimum of S$12 in government and aided schools. The Education Ministry has said it will not intervene, as schools should be free to determine their fees in response to parents' wishes and demands. The government has set up a means-tested Financial Assistance Scheme (FAS) specially for independent school students to ensure that no student is denied a place solely on financial grounds. The independent schools also have their own financial assistance schemes, such as endowment funds, parallel FAS schemes, and scholarships.

The independent schools can also determine their own enrolments, a privilege denied government and aided schools. They continue to receive students through the centralised school allocation

system operated by the Ministry of Education, and all claim to admit students primarily based on academic merit. Those schools with primary feeder schools give priority to students from these schools.

Beyond having to conform to specific national education policies on bilingualism, moral education and common national examinations, the schools can determine their own curricula. However, all teachers must be registered with the Ministry of Education in accordance with the Education Act.

The Direct Subsidy Scheme

Like the ISS, the DSS allows some autonomy in finance, curricula, fees, staff recruitment and staff deployment. As in Singapore, however, the Education Department exerts considerable control over the DSS schools by imposing conditions for admission to the scheme. These relate to such matters as the use of the government subsidy, maximum class size, teacher registration, ratio of graduate to non-graduate teachers, and the submission of audited accounts (Hong Kong Education Department 1991a).

All DSS schools qualify for government subsidies based on a banding system. Subsidies are on a per capita basis, and are in inverse proportion to the fees charged. The actual subsidy awarded is between one-quarter and the full cost of an aided place. This latter feature marks a difference between the ISS and the DSS. Another difference is that the Hong Kong government does not provide direct financial assistance for DSS students, but instead recommends that DSS schools adopt their own fee remission schemes. The authorities argue that government subsidies already take into account fee remission rates on standard fees in aided schools.

DSS schools can also apply for interest-free loans repayable over 10 years. These loans may be used for school upgrading, redevelopment and major structural repairs. The loans are limited to 155 per cent of the cost of a standard aided school. In addition, loans are available for emergency repairs if the schools have insufficient resources to meet such costs. These financial assistance schemes differ from those in Singapore, where the government contributes a fixed percentage of the independent schools' capital costs.

Like the ISS schools, the DSS schools can determine their own fees. Whereas Form 1 to 3 education is free in the public sector, in 1992 DSS annual fees ranged from HK$1,000 to HK$89,950, with the

international schools charging substantially more than the other DSS schools.

Another point of similarity is that the DSS schools can decide their own enrolment figures. Unlike the ISS schools, however, the DSS schools admit students outside the centralised Secondary Schools Places Allocation scheme. They can also admit students from throughout Hong Kong, thus breaking the geographically-based restrictions. In addition, the schools are allowed to set assessment tests to evaluate applicants. The government requires DSS schools with feeder primary schools to maintain priority to students from these schools (Hong Kong Education Department 1991a).

The DSS schools have greater freedom than the ISS schools in curriculum. No government requirements are imposed on them beyond a description of curricula in their annual prospectuses. The international schools offer curricula geared towards foreign education systems and thus present a genuine alternative to the public sector. However, the curricula of local private schools is very similar to that in the mainstream schools.

EXTENT OF PARTICIPATION IN THE ISS AND DSS

The Independent Schools Scheme

Three well-established and prestigious government-aided boys' secondary schools became independent in 1988, a year after the scheme was first mooted. They were followed in 1989 by two prestigious government-aided girls' secondary schools, and in 1990 by the premier government boys' secondary school. The premier government girls' secondary school and a top-ranking government-aided girls' secondary school turned independent in 1993. Another three prestigious schools have indicated intention to join the scheme in the next few years. All these schools admit students in the top 20 per cent of the primary school intake, and all are ranked in the top 30 out of 138 secondary schools, with six of them in the top 10 (*Straits Times*, 19 August 1992).

The ISS has been accused of elitism, and the government may have to temper its elitist philosophy, especially since the philosophy cost it votes in the 1991 general elections (Singh 1992). In 1992 the number of independent schools was temporarily capped at eight. The official reason was that there were not enough capable principals and teachers to run such schools (*Sunday Times*, 19 July 1992), but

Gopinathan (1992) saw this as a move to quieten controversy over the independent schools. Another government move to allay public disquiet is the announcement of the establishment of 'autonomous schools', which will be given greater autonomy while charging low fees. These schools will provide greater parental choice and provide competition for the independent schools. The Ministry of Education has announced intention to launch the scheme in four to six selected schools in 1994, and hopes to have 10 to 15 such schools over the subsequent few years (*Straits Times*, 12 March 1993).

The Direct Subsidy Scheme

The DSS is targeted at four groups of schools: BPS private schools, non-BPS private schools, international schools, and aided schools. The Hong Kong government originally envisaged that not more than six aided schools would join the DSS per year for the first five years of implementation from 1991 to 1995. No limit was imposed on private or international schools. The government also said that not more than one-third of all secondary schools would be in the DSS by the year 2000 (*Ming Pao*, 8 December 1989). In response to growing criticism from legislators and educationists that the DSS was elitist, the target for aided schools was lowered to six schools in the period 1991 to 1995. This paralleled moves in Singapore to limit the number of independent schools to eight for the time being.

Nine of the 442 secondary schools joined the DSS in 1991. The nature of these schools provides an interesting contrast with Singapore. Four of the nine schools are international schools, which previously had not received government funding. They cater mainly for the expatriate community, and as mentioned earlier are geared towards foreign educational models. Thus these schools are now being government-funded while being allowed to continue operating outside the mainstream. The remaining five schools are private 'leftist' schools closely associated with mainland China. For this reason they have long been excluded from the mainstream. Previous attempts to join the BPS in 1977 and to attain aided status in 1986 proved unsuccessful. Once again, the government is now funding schools that it previously excluded from funding. A non-BPS private sixth form college and the last remaining school in the Assisted Places Scheme joined the DSS in 1992 and 1993 respectively. One irony of the Hong Kong DSS is that instead of saving the government money, the government is now having to spend more on subsidising

private schools.

The DSS has not attracted BPS schools and aided schools. Up to the end of 1992, only one BPS school had expressed interest in joining the scheme. BPS schools are held back by two main factors. First, they lack sufficient reputation among students and parents and are thus worried about being able to attract enough students. Second, many BPS schools operate out of rented premises and hence do not meet the government requirement that DSS schools must operate from self-owned premises (*Ta Kung Pao*, 4 May 1992).

Several factors explain the cool response to the DSS from aided schools. The events in China's Tiananmen Square in June 1989 exacerbated the emigration of principals, teachers and students, and not many school administrators were willing to initiate major reforms in this climate of social and political uncertainty (*Ming Pao*, 11 June 1990). Also, the DSS funding arrangements were not attractive. Aided schools stood to lose the previously guaranteed full funding of capital costs, and would now have to secure government loans. Per capita subsidies based on the average cost of aided places would not give well-established schools the funding they would need to cover their higher salary costs.

In 1990, the Hong Kong government stressed that it was necessary to have some aided schools in the DSS in order to build parental confidence in the DSS (*Ming Pao*, 1 November 1990). To attract aided schools, it revised the funding arrangements in 1991. The revision allowed aided schools to retain their current government subsidies for six years, while still being eligible for DSS subsidies. The government also promised to continue to cover all capital costs; and to cover upgrading beyond basic standards, schools were to become eligible for interest-free loans of up to 55 per cent of the costs of a standard aided secondary school. The government also announced increased subsidies for all DSS schools (Hong Kong Education Department 1991b).

After the revised funding arrangements were announced, a prestigious aided boys' secondary school embarked on plans to join the DSS in 1992. The principal saw the DSS as a chance to break out of the centralised system and introduce greater diversity and innovation into Hong Kong education (Ha 1990; *Wah Kiu Yat Pao*, 28 September 1991). Just after the school had selected 120 Form 1 students, however, the Legislative Council Finance Committee blocked the revised DSS funding arrangements. Legislators were outraged over government plans to save HK$406.4 million by increasing class sizes even while announcing a record HK$22 billion

budgetary surplus (*Express*, 18 March 1992). The proposals to increase DSS funding from HK$33 million in 1991/92 to HK$76 million in 1992/93 could not have come at a worse time. As a result of this fiasco, the school had to shelve its plans. Since the school was the first aided school to indicate interest in the DSS, it was widely regarded as a test case. Government incompetence in dealing with this matter dealt a severe blow to the plans that other aided schools may have had to join the DSS. The Education Department is now looking into ways to make the DSS more attractive to aided schools (*Sing Tao Jih Pao*, 4 March 1993).

In a further attempt to allay criticism of DSS elitism, the Education Department has imposed new restrictions on aided schools joining the DSS. They are now required to take students with a wide range of learning abilities, and are not to expel students solely on the grounds of unsatisfactory academic performance (Hong Kong Education Department 1992). However, this move seems to be at odds with the promotion of diversity and autonomy.

CONCLUSIONS

The rationales for the ISS and DSS are similar in many respects, and echo those of some other privatisation initiatives. There has been a worldwide re-appraisal of the appropriate degree of state provision of educational services, with an encouragement of greater individual responsibility. After a period of rapid expansion of educational provision to ensure mass schooling, many countries now have increased commitment to diversity in education. In addition, the language of market economics has been heavily utilised, with talk of the benefits of competition between schools and greater parental choice.

The governments of both Singapore and Hong Kong have also promoted autonomy for the majority of schools. These moves come amid efforts to corporatise government services in both cases. Government cost-saving has been explicitly mentioned as one benefit of school privatisation. However, while similar concerns elsewhere have been prompted in large part by prolonged economic recession, in both Singapore and Hong Kong concerns with cost-saving have come amid healthy budgetary surpluses.

At the same time, there are also significant differences in the rationale behind these schemes. The Singapore government views the scheme as part of an overall plan to foster creativity, innovation and

educational excellence. The independent schools are to cater to the academic elite and are to serve as models for other schools. These efforts are clearly linked to a recurrent theme in government policies: the promotion of Singapore's economic growth and competitiveness in the global economy. No comparable policy statements have been made in Hong Kong, which has instead been dominated by the impending 1997 transition.

The ISS and DSS are obvious examples of government attempts to grant greater autonomy to schools even while maintaining ultimate control. For example, both governments still impose requirements on teacher registration and the submission of audited accounts. The term 'private' in both cases must therefore be understood not to mean 'completely free of government control', 'non-government financed' or 'profit-making', but rather a situation lying along the public-private continuum, with government funding and regulation of private schools (James 1988).

The ISS and the DSS are targeted at different categories of schools. The ISS is aimed at well-established government and aided schools. It has at least partly succeeded in reaching its target group as it has managed to attract several elite schools. However, the DSS has had less success. Several non-BPS and international schools have joined the DSS, which now means that the Hong Kong government is subsidising schools previously excluded from public funding. No BPS or aided schools have yet participated in the scheme, due to a variety of reasons including an unwillingness to initiate reforms amid social and political instability, inability to satisfy DSS entrance requirements, and unfavourable funding arrangements.

Both governments have had to respond to charges that the school privatisation initiatives are elitist. The Singapore government has responded by temporarily limiting the number of independent schools, and by proposing a new category of schools to provide competition for the independent schools. Meanwhile, the Hong Kong government has stressed that the number of aided schools joining the DSS will be small. It has also limited the autonomy aided schools can enjoy on joining the DSS.

This paper has shown the similarities and differences in the ISS and DSS in terms of rationale, implementation framework and response from schools. It has also drawn on and contributed to the international literature on school privatisation efforts. Finally, it has shown the impact of the wider socio-political context in shaping the formulation of policies and in the schools' response to these policies.

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The Financing of Hong Kong Kindergartens

Pedro Ieong

This paper primarily focuses on the financing of Hong Kong kindergartens in the early 1990s. To place the discussion in perspective, the paper commences with a historical sketch. It then examines the incomes and expenditures of the two main types of kindergartens, namely non-profit-making and 'other' private kindergartens. Drawing on previously unpublished data from the government's Education Department, the paper pays particular attention to expenditure on salaries as a proportion of total expenditures, and notes changes in the late 1980s and early 1990s. The paper also comments on issues of control by the government's Education Department, and on the question whether kindergartens should be brought into the sector subsidised by the government.

HISTORICAL BACKGROUND

The 1950s to the 1970s

The period from the late 1950s was one of major growth in the kindergarten sector. Whereas in 1957 only 19,000 children attended kindergartens, by 1971 enrolment had reached 140,960. However, much of this growth was at the expense of quality. Two indices were the proportion of qualified teachers and the size of classes. Between 1957 and 1971 the proportion of qualified teachers dropped from 35 to 20 per cent, while average class size grew from 25 to 35 pupils (Opper 1992, p.12).

In 1971, the Education Ordinance and Regulations were amended to cater for compulsory and universal primary education (Hong Kong 1971a, 1971b). Kindergarten education was defined in the revised ordinance (p.6) as "education which is suitable for normal pupils who have attained the age of four years but not the age of five years".

However, many kindergartens continued to admit children aged two to six.

The 1960s and 1970s brought increase in the number of married women taking jobs, which in turn increased demand for day-care of young children. The proliferation of private child care centres prompted the government to enact the Child Care Ordinance and Regulations (Hong Kong 1975, 1976), which placed child care centres under the jurisdiction of the Social Welfare Department and clarified the distinction between child care centres and kindergartens. It was intended that child care centres would cater for children aged two to six, while kindergartens would provide two-year courses for children aged four and five.

However, three factors combined to nullify the effects of the legislation. First, the position of kindergartens offering nursery-level courses was by then well entrenched; second, the higher fees of most child care centres discouraged parents from sending their children there; and third, child care centres were in any case limited in numbers. Seven years after the 1975 amendment to the ordinance the government officially recognised that the legislation was untenable. It made a further amendment to the ordinance which redefined kindergarten education and permitted enrolment of children aged between three years and eight months and six.

Developments in the 1980s

In 1980, the government published a Green Paper on primary education and pre-primary services (Hong Kong 1980). It was followed by a White Paper (Hong Kong 1981), which brought major changes to the pre-primary sector. The first was an attempt to reduce the ill-effects on kindergartens of the competition to gain admission to prestigious primary schools. Through the Primary One Admission System, the selection process for primary schools commenced a full year before the children actually had to enter the primary schools. This reduced the distorting effects on the kindergarten curricula, though it did not eliminate the backwash effects.

Two further policies set out in the White Paper were reimbursement of rents for non-profit-making child care centres and kindergartens that had appropriate accommodation, and a fee assistance scheme through which children from low-income families would have a proportion of the fees for child care centres or kindergartens paid by the government. The fee assistance scheme was administered by

the Social Welfare Department.

The 1982 Llewellyn Report also touched on issues of kindergarten education. Discussing the extent of future government involvement, the report noted that one possibility was "status quo and minimal government regulation", while on the other extreme was "top priority to early childhood education, devoting to it scarce skilled human resources in tandem with a greater share of the physical and financial resources, even at the expense of other echelons of the education system". The Report recommended unequivocally (p.46) that:

> In the longer term, *kindergartens should become part of the aided sector* with the Government having a role similar to that which it undertakes in respect of primary and secondary education. [emphasis original]

Two years later, the Advisory Inspectorate of the Education Department produced two booklets for kindergarten operators (Hong Kong 1984a, 1984b). These booklets exemplified the way that on aspects of the preschool education where public money was not involved, the government could be very efficient. However, on matters requiring major expenditure, the authorities were more cautious.

Recommendations by the Education Commission

The Education Commission, which had been created in 1984 following the recommendations of the Llewellyn Report, did not at first devote attention to the kindergarten sector. However, kindergartens were among the matters examined in the Commission's second report (1986), which noted deficiencies in teacher: pupil ratios and the quality of teachers. As a long term target to prepare for unification of child care centres and kindergartens, the Commission recommended a teacher:pupil ratio of 1:15. The Commission may have left the target date deliberately undefined in order to give the government flexibility.

The staff structure recommended by the Commission for standard, six-classroom bisessional kindergartens implied a ratio of two teachers to each class. The Commission also recommended that kindergarten teachers should work full-time, i.e. either two sessions in half-day kindergartens or one session in whole-day kindergartens. The structure was as follows:

Post	Grade
1 Head Teacher	1 Qualified Kindergarten Teacher
12 Teachers	2 Qualified Kindergarten Teachers
	8 Qualified Assistant Kindergarten Teachers
	2 Unqualified Kindergarten Teachers
1 Clerical Staff	1 Clerical Assistant
2 Janitors	2 Workmen II

On the matter of quality, the Education Commission estimated that only 23 per cent of kindergarten teachers were trained. In most cases this training had been either a 12-week part-time course run by the Advisory Inspectorate of the Education Department to produce Qualified Assistant Kindergarten Teachers (QAKTs), or a two-year part-time course run by the Grantham College of Education to produce the Qualified Kindergarten Teachers (QKTs). The report proposed in the long run all teachers should be trained, and that interim targets would be 66 per cent by 1990 and 84 per cent by 1994.

To ensure that the improved standards were achieved, the report proposed that:

a) sufficient courses would be organised to ensure an adequate supply of trained teachers;
b) measures requiring individual kindergarten operators to employ trained teachers would be imposed in phases to tie in with (a) above;
c) salaries would be made comparable to those of child care staff, which would help retain experienced kindergarten teachers and encourage them to seek training; and
d) the higher salary costs resulting would be covered by an improved scheme of fee assistance which would extend to a sufficient percentage of parents to allow kindergarten operators to increase their fees without fear of losing pupils.

Concerning the last point, the report noted (p.43) that all kindergartens were privately operated, though 60 per cent were non-profit-making. The Commission was concerned that additional fee assistance should support increased salaries rather than increased profit.

At the time of the report, the weighted average fee was $155.70 by 10.93 weighted instalments for non-profit-making kindergartens, and $183.28 by 11.71 instalments for other private kindergartens (Education Commission 1986, pp.246-7). Salary expenditures

expressed as a proportion of fee income were 63.3 and 45.6 per cent respectively. Thus the non-profit-making kindergartens spent an average of $1,077 per pupil per annum on salaries whereas the other private kindergartens spent $978. Using the model manning scale and applying the proposed normative scale with the notional mid-point for calculation, the unit cost of the staff salaries (including clerks and janitors) per pupil per annum was found to be $2,055. The Education Commission's proposal of a 100 per cent increase in staff salary expenditure showed great determination to improve the sector.

On the basis of the figures on proportions of fee income spent on salaries (Table 1), the Education Commission estimated the fees needed to raise the salary of the kindergarten teachers to the normative salary scales recommended, keeping all other variables unchanged. The Commission decided that the inclusive fee would have to rise from $155.70 to $245.16 per instalment in non-profit-making kindergartens, and $183.28 to $275.20 per instalment in other kindergartens. This would represent respective increases of 57.5 and 50.2 per cent.

Table 1: Estimate of New Kindergarten Fees, 1986

	Non-profit-making	Profit-making	All kindergartens
1. Weighted average kindergarten fee for 1986/87 ($)	155.70	183.28	171.15
2. Salary expenditure as a percentage of fee income (%)	63.3	45.6	-
3. Salary expenditure ($) (3) = (1) x (2)	98.56	83.58	-
4. Non-salary expenditure ($) (4) = (1) - (3)	57.14	99.70	80.25
5. Enrolment September 1985	103,400	122,822	226,222
6. Proposed staff cost per place p.a. ($)	2,055	2,055	-
7. Weighted average number of instalments in 1985/86	10.93	11.71	11.35
8. Proposed staff cost per place per instalments ($) (8) = (6)/(7)	188.01	175.49	181.22
9. New kindergarten fee ($) (9) = (4) + (8)	245.16	275.20	261.47

Source: Education Commission (1986), p.246.

The Commission realised that such a burden could not be placed

on the government or parents alone, and therefore recommended a split contribution. Under the old scheme, parents whose incomes were below the baseline of the Public Assistance Scheme could gain remittance of all their kindergarten fees. Parents whose incomes were above the baseline were required to contribute 15 cents for each dollar of total income above the baseline. At the time of the report, non-profit-making kindergartens on average used 57.1 per cent of their incomes to pay teachers' salaries. Thus, for every 15 cents of extra income arising from the increase of fees, 8 cents would go to the salary portion and 7 cents to the non-salary portion. Applying this ratio to calculate the split contribution factor, the parents' contribution to the kindergartens' non-salary and salary portions was assessed as 9 cents and 6 cents respectively for each extra 15 cents. Perhaps because the calculation was rather complex, the Education Commission report did not elaborate. However, it observed that use of a single factor approach would benefit only 17 per cent of parents, whereas the split contribution factor would benefit as many as 57 per cent.

Unfortunately, all this amounted to an empty promise. The new scheme was not launched until 1990, by which time many of the details of the 1986 report had been forgotten. Furthermore, by that time the government was committed to massive tertiary education expansion, and cash was limited. The government submitted a very lean fee assistance scheme to the Finance Committee (Hong Kong 1990a). Few questions were raised, and the agenda item was approved.

Similar delays were experienced over the salary scale. Only in February 1990, nearly four years after publication of Education Commission Report No.2, were the (normative) Recommended Salary Scales for Kindergarten Teachers announced (Hong Kong 1990b). This circular was subsequently superseded by another (Hong Kong 1992a). The main differences between the two circulars were that the QAKTs' starting point was raised two points in the Master Pay Scale, and the headship allowance was revised from $500 to $960 per month.

Generally, the more experience and the more training that teachers have, the higher will be their salaries. The corollary is that kindergarten operators who wish to keep salary expenditures low have to be content with inexperienced and untrained teachers. Some kindergartens also employ the minimum number of teachers, e.g. five teachers for 10 bisessional classes.

Sometimes, however, the teacher:class ratio does not accurately

portray the attention received by individual pupils because the class size varies widely. Education Regulation 88 mandates maximum sizes of 30 pupils for bisessional kindergarten classes (lower and upper levels), 20 for whole day kindergarten classes (lower and upper levels), and 20 for bisessional nursery classes.

STATISTICS FROM THE GOVERNMENT'S DATABASE

In response to a request by the author, in 1992 the Director of Education graciously supplied information on kindergartens and their teachers on two database files. The first file, on institutions, contained 11 sets of data, namely:

- a school code,
- the projected number of classes in 1992,
- the projected enrolment (without breakdown into different levels),
- the fee for a.m. nursery classes,
- the fee for p.m. nursery classes,
- the fee for whole-day lower kindergarten classes,
- the fee for a.m. lower kindergarten classes,
- the fee for p.m. lower kindergarten classes,
- the fee for whole day upper kindergarten classes,
- the fee for a.m. upper kindergarten classes, and
- the fee for p.m. upper kindergarten classes.

The second file, on kindergarten teachers, contained seven sets of data, namely:

- a school code,
- the teachers' identity numbers,
- qualifications of the teachers,
- estimated salaries as at January 1992,
- employers' provident fund contributions as at January 1992,
- estimated salaries as at September 1992, and
- employers' provident fund contributions as at September 1992.

In the first file, the school names were deleted; and in the second file teacher identity numbers were changed by scrambling to ensure that it was impossible to identify the schools or persons being

researched.

To make best use of the data, the author requested additional information from the Education Department on the types of schools (i.e. non-profit-making or private independent). He also requested help to identify the 12 international kindergartens, which form a class by themselves in terms of fees, qualified teacher ratios, etc.. Actual monthly expenditures of each school were also obtained.

After completion of data input, other statistics were generated. The average fee was computed using the lower a.m. kindergarten fee as the average fee if available, and if not an average of the other fees. To calculate kindergarten incomes, projected enrolment was multiplied by average fees. Total expenditures on salaries were estimated as the actual monthly salaries plus employers' provident fund contributions multiplied by 12 (months).

Table 2: A Profile of Hong Kong Kindergartens (N = 716)

Variable	Mean	Standard Deviation	Mini-mum	Maxi-mum	N Label
Projected no. of classes 1992	9.91	5.86	1	58	716
Projected enrolment 1992	251.15	196.32	4	2040	716
Average fee in 1992	6042 01	3803.80	1400	36100	715
Fee for nursery a.m. classes	5816.80	3290.74	1776	36100	676
Fee for nursery p.m. classes	5731.33	2597.54	2280	34800	564
Fee for lower whole day KG	12389.03	5167.01	5165	43600	157
Fee for lower a.m. KG	5771.50	3056.40	1400	34800	688
Fee for lower p.m. KG	5749.34	2773.38	187	34800	567
Fee for lower whole day KG	12521.26	5473.45	5165	43600	158
Fee for lower a.m. KG	5845.62	3367.65	1400	34800	676
Fee for lower p.m. KG	5789.17	2944.18	1870	34800	572
Teachers' salaries p.m.	68290.59	55738.19	2450	637706	714
Teachers' provident fund p.m.	4033.32	2743.50	60	18682	450
Projected salaries Sept. 1992	64625.90	51095.03	2200	400846	708
Projected prov. fund Sept. 1992	3900.65	2699.43	60	15542	449
Teachers' expenditure	849991.16	692726.30	29400	7652472	714
Income from fees	1497620.40	1423329.98	5600	16993200	715
Percentage spent on teachers	66.51	34.47	15	643	714
No. of qualified KG teachers	2.14	2.76	0	30	709
No. of qualified asst. KG teachers	2.68	2.70	0	21	709
No. of untrained KG teachers	5.84	4.95	0	49	709
Total number of teachers	10.66	7.00	0	56	709
Staff:class ratio	1.12	0.49	0	5	709
Qualified teacher ratio	0.45	0.27	0	1	709

Source: Generated from database files provided by the Education Department.

Other fields were obtained by joining the two files and adding data from kindergartens which had submitted information when applying for revision of fees. The final database contained 26 fields. Table 2 presents a profile of the whole sample.

Readers might identify healthy features in Table 2, such as that on average kindergartens have a 0.45 qualified teacher ratio (i.e. 45 per cent), a class size below 26 pupils, and 66.5 per cent of incomes spent on salaries. However, the teacher:class ratio was still 1.12 which was far below the 2.0 recommended by the Education Commission. Moreover, the weighted average of expenditure of teacher salaries over income, i.e. dividing average total salary expenditure by the average fee income, was only 56.8 per cent. Also, the figures showed large standard deviations, which indicated substantial variation within the sample.

To examine the situation further, 12 international, six non-profit-making and six other private kindergartens were extracted to form a group. The remaining kindergartens were then separated into two groups, non-profit-making and other private. The descriptive statistics for each of these three groups showed significant differences, particularly in the qualified teacher ratios, teacher:class ratios, and percentages of income spent on teachers' salaries.

The author then extracted a further four groups for study:

- the 20 highest income non-profit-making kindergartens;
- the 40 highest income other private kindergartens;
- 38 non-profit-making kindergartens which spent less than 50 per cent of their income on salaries; and
- 22 other private kindergartens which spent less than 30 per cent of their income on salaries.

The cut-off percentages for the last two groups were even more stringent than the 63.3 per cent and 45.6 per cent identified by the Education Commission (1986, p.246). Tables showing the descriptive statistics are presented in the Appendix.

CONTROL OF KINDERGARTEN FEE REVISION

Prior to 1990, the Education Department kept a tight rein on all requests from private schools, which included kindergartens, to revise their fees. All requests exceeding a certain level had to be justified by audited accounts. This requirement deterred many schools from

raising fees unless it was absolutely essential. Schools did not often apply first because preparation of audited accounts was troublesome and costly, and second because some schools did not wish their accounts to be closely examined. Fee increases for kindergartens remained moderate between 1986-87 and 1989-90. However, when the control on revision of inclusive fees for kindergartens was relaxed due to the introduction of the normative salary scales for teachers, fees soared to three or four times their 1986-87 levels (Table 3).

Table 3: Kindergarten Inclusive Fees, 1989-90 to 1991-92

		1989/90	1990/91	1991/92
For whole day operation				
Non-profit-making	Minimum	840	3,552	3,680
Kindergartens	Maximum	19,139	20,910	27,063
	Weighted Average	5,988	8,125	8,771
	Median	4,860	6,780	8,094
Other private	Minimum	2,940	2,940	2,940
Kindergarten	Maximum	35,340	43,600	43,600
	Weighted Average	8,117	8,813	9,972
	Median	6,930	9.000	10,012
For single session operation				
Non-profit-making	Minimum	1,000	1,000	1,200
Kindergartens	Maximum	23,100	27,400	30,800
	Weighted Average	2,806	3,632	4,294
	Median	2,532	3,410	3.960
Other private	Minimum	450	650	650
Kindergarten	Maximum	19,500	34,800	34,800
	Weighted Average	3,736	4,727	5,632
	Median	2940	3,908	4,716

Source: Secretary for Education and Manpower, answering questions by Mr. Cheung Man Kwong in Legislative Council, 3 February 1993.

The scale of this increase might ask one to query whether there was still any control on kindergarten fees. The answer would be both positive and negative. After the 1990 introduction of normative salary scales to encourage kindergartens to raise teachers' salaries, the General Schools Finance and Accounts Circulars, which are issued annually to inform kindergartens of the procedures for fee increase application, indicated that the level of fee increases would be based on separate salary and non-salary portions. The salary portion

comprised the salaries for teaching and non-teaching staff plus the employer's provident fund contributions. The non-salary portion consisted of supervisor's pay, general running expenses, and the profit/surplus margin (Hong Kong 1990c, 1991b, 1992b, 1993).

The circulars further advised that there would be no limit on the increase in fees on the salary portion as long as the salaries did not exceed those of the normative scale recommended by the Director of Education. Supervisors of kindergartens applying for an increase in the non-salary portion of less than $216 per pupil in 1990-91 ($250 in 1991-92, $285 in 1992-93 and $343 in 1993-94) were required to submit Schedules 1 to 4 only. Those applying for higher increases in the non-salary portion were required to submit Schedules 1 to 14 as well as audited accounts for the previous school year.

A glance at the long list of tables to be completed can explain why few supervisors requested a revision of the non-salary portion in excess of the amount specified by the Education Department. Schedules 1-14 (Hong Kong 1993) were:

1. Proposed school fee, class structure and enrolment for school year 1993-94;
2. Teaching staff salaries and provident fund for school year 1993-94;
3. Non-teaching staff salaries and provident fund for school year 1993-94;
4. Provision for long service payment (only for schools not operating provident fund scheme);
5. Subsidies from government/sponsors;
6. Summary of operating expenses;
7. Supervisor's pay;
8. Movement of fixed assets and depreciation for 1992-93 and 1993-94;
9. Additions to fixed assets (including improvement of existing school facilities);
10. Major repairs and maintenance (for items each costing $8,000 and above);
11. Minor repairs and maintenance (for items each costing less than $8,000);
12. Bank interest and other interest expenses;
13. Other operating expenses; and
14. Rental of school premises.

In 1992, only about 70 of the 712 kindergartens applied for

increase for non-salary portion in excess of $285. Perhaps the unlimited increase in the salary portion combined with the non-salary portion was sufficient to keep most if not all kindergartens financially viable, provided that there was sufficient enrolment. In connection with the latter, however, it is important to note that enrolments peaked in 1986 and that the kindergarten population has been on the decline since then (Table 4).

Table 4: Enrolment in Kindergartens, 1982-91

1982	205,200
1983	209,869
1984	226,450
1985	229,089
1986	231,610
1987	225,108
1988	214,703
1989	201,750
1990	196,466
1991	193,658

Source: Hong Kong (1991a).

The number of kindergartens has also declined since the late 1980s (Table 5). In particular the number of the private independent (as opposed to non-profit-making) kindergartens has dropped sharply. Some were forced out of business by high rents while others opted to change to non-profit-making status, which entitled them to refund of rent and rates from the Education Department.

The sharp drop in enrolment coupled with the population movement of young families to the New Territories has forced the closure of many kindergartens, both independent and non-profit-making, in the urban areas. However, the newspapers contain periodic reports of parents queuing overnight for application forms to kindergartens in the developing New Towns which have an acute shortage of places. The Education Commission (1986, p.244) was mistaken in its projection of enrolment growth from 237,000 in 1986 to 270,000 in 1992! At that time there were 787 registered kindergartens, among which 319 were non-profit-making and 468 were independent. Within six years, the private independent kindergartens

had dwindled from 468 to 313, though the non-profit-making kindergartens had increased from 319 to 403.

Table 5: Number of Kindergartens by Type and Enrolment, 1989-1991

	1989	1990	1991
Number of kindergartens			
Non-profit-making	375	399	403
Other private	416	386	364
Total	791	785	767
Number of places available			
Non-profit-making	n.a.	n.a.	n.a.
Other private	n.a.	n.a.	n.a.
Total	224,267	224,718	223,376
Enrolment			
Non-profit-making	105,274	107,006	109,955
Other private	96,476	89,460	83,703
Total	201,750	196,466	193,658

Source: Secretary for Education and Manpower, answering questions by Mr. Cheung Man Kwong in Legislative Council, 3 February 1993.

In sum, the golden era for the kindergartens appears to have passed. The Education Department data files indicated that in 55 kindergartens, the income from fees could not cover even salaries, let alone running expenses and rent for private independent kindergartens. Private enterprises operating at a loss cannot last long. In addition to these 55 institutions, kindergartens with less than four classes may also have financial difficulties, because the smaller the size of the school the greater the proportional overhead expenses. According to the data files, 48 non-profit-making kindergartens and 39 other private kindergartens had only one to three classes.

Thus possibly well over a hundred kindergartens have difficulties finding ends meet. The problem facing these schools is they cannot ask for a large increase of fees without fear of driving away the remaining pupils. Yet without an increase in income, there is no way to improve the salary of the teachers or the quality of education.

For kindergartens in more prosperous circumstances, success has been achieved through a combination of high enrolments, high fees, low percentages of salary over income, low teacher: class ratios, and low qualified teachers' ratios. Many of these schools have profit margins exceeding 20 per cent, which for some large institutions means over a million dollars per annum.

The issue then is not how much profit the kindergartens are making each year, but whether they give a fair return in the quality of education. Many kindergartens with large surpluses are so-called non-profit-making institutions. The controlling mechanism of the Education Department fails to monitor them sufficiently closely. In the main, the non-profit-making kindergartens have not been required to submit audited accounts. Unlike aided primary and secondary schools, the initial setting up costs of the kindergartens are not donated by the sponsoring body, but have to be repaid in instal-ments over a period of time. Therefore in the early years of the kinder-gartens, much of the income is used to repay loans rather than improve the salary of teachers.

The controlling procedures adopted at present by the Education Department can be effective in controlling those schools which play fairly with the parents and the Education Department. However, schools can underestimate projected enrolments and propose increases in the number of operating classes so as to inflate the expenditure on staff salaries. Also, provisions such as long service payments and major repairs can be set aside but never expended. Even if a school were found to be under-spending, the penalty would be adjustment of the level of increase permitted and in the extreme no revision for the year allowed. It is not necessarily recommended that the Education Department should make it mandatory for kinder-gartens to submit audited account. However, officers could at least take a closer look at those schools which spent less than a certain percentage on teacher salaries.

SHOULD KINDERGARTENS BE SUBSIDISED?

At a Legislative Council Meeting on 3 February 1993, the Hon. Mr. Cheung Man Kwong moved that:

> Since kindergarten education is of vital importance to the development and growth of young children, this Council urges the Government to increase its commitment to kindergarten

education, including expanding the fee remission scheme, subsidizing kindergarten teachers' remuneration, and bringing kindergartens into the scope of subsidized education eventually, so as to improve the quality of kindergarten education and afford fuller attention to young children.

Mr. Cheung pointed out three main problems in the sector:

1. Since Government did not subsidise kindergarten education, parents had to shoulder the burden alone and pay fees averaging $4,000 per annum for bisessional and $8,000 per annum for whole day places. Fewer than 6 per cent of parents received a subsidy from the fee assistance scheme.
2. To prevent loss of pupils, many kindergartens kept their fees at a competitive level and did not ask for a larger increase in the annual revision of fee. And to make ends meet, schools had no choice but to suppress teachers' salaries.
3. Kindergarten teachers did not remain untrained because they did not wish to be trained, but rather because the salary was low, workloads heavy, demands from society high, and future prospects dismal. Less than 50 per cent of the serving teachers had received training. The wastage of trained and untrained teachers was high.

To address these problems and break the vicious cycle, Mr. Cheung proposed:

1. *First Stage*. To introduce regulatory measures to require kindergartens to employ a fixed ratio of qualified teachers. Kindergartens should be required to pay their teachers according to the normative salary scales. At the same time, Government should expand the fee assistance scheme to benefit more parents and to subsidise part of the teachers' salaries.
2. *Second Stage*. After the government has clearly shouldered the burden of kindergarten education, it should operate a number of its own kindergartens, using them as models. The government should also encourage more non-profit-making kindergartens, in order to promote healthy competition.
3. *Third Stage*. When the government shoulders a major portion of expenditure, there would be sufficient grounds for greater control of the subvented sponsoring bodies, including teacher training, curriculum, and school activities. The mode of control could be through a code of aid similar to those of aided primary and

secondary schools.

Following Mr. Cheung, 14 councillors spoke on this issue. All were in favour of the motion, though Mr. Timothy Ha Wing Ho and Mr. Li Ka Cheung had reservations about bringing the kindergartens into the scope of subsidised education because they felt that subsidised education does not provide sufficient flexibility in use of the resources, stifles initiative, standardises manning and salary scales, and drives private operators out of the market.

The Secretary for Education and Manpower in reply stated that:

> It is the Government's policy to enable all children of the relevant age group to have access to kindergarten education within a non-compulsory private sector system. Contrary to the perception of some Members, this policy positively recognizes the value of kindergarten education for the development and growth of our children. And it has enabled 85 per cent of our children in the age group to attend kindergartens.

The Secretary reminded listeners that the government aim had been to increase the proportion of trained teachers and to raise kindergarten standards to those of child care centres so as to pave the way for the eventual unification of pre-primary services. He felt that results had already been encouraging. In the first two years of its implementation, the new package had boosted average teacher salaries in real terms by 19.5 per cent for Qualified Kindergarten Teachers and 14 per cent for Qualified Assistant Kindergarten Teachers. Also, the wastage rate of trained teachers had dropped from 19.4 per cent in 1988-89 to 12.0 per cent in 1990-91. Enrolment in QAKT courses had risen sharply, by 30 per cent in the first year and by another 28 per cent in the second. QKT courses had done less well with a 30 per cent drop in enrolment in 1991-92 compared to the year before, but in September 1992 61 per cent of kindergartens were employing 40 per cent or more trained teachers, thus achieving the first of the government's successive targets.

All this, the Secretary continued, had not been achieved without substantial public funding:

> Total expenditure on kindergartens for the 1992-93 school year will reach $165 million.... The provision for fee remissions, at $41 million, includes a substantial increase of $15 million.... This represented a 37% increase over the original provision, and has

> increased the proportion of kindergarten pupils who are able to benefit from the fee remission scheme from 5% to 8%. When our present plans to bring the points system for kindergarten fee remissions in line with that for senior secondary students are fully implemented in five years' time, the provision will have increased to over $100 million at today's prices. This will further increase the proportion of kindergarten pupils benefiting from fee remissions to a substantial 16%.

After some further points, the debate on kindergarten education ended. Mr. Cheung Man Kwong's motion was carried unanimously.

CONCLUSIONS

The kindergarten sector grew dramatically between the late 1950s and the 1980s. However, much of that growth was at the expense of quality. Partly for this reason, during the 1980s the government looked closely at the sector, seeking in particular ways to increase the proportion of trained teachers. One way to do this was to provide more training courses. Another way was to raise salaries in order to increase retention and improve teachers' career prospects.

Most educators and parents would like the government to take a further step and bring kindergartens into the subsidised sector. However, the government has up to now deemed kindergarten education as desirable but not essential, and it is unlikely that the government will in the near future shoulder the high recurrent expenditure which would be required. Estimates of potential bill for 1993 were $1.3 billion, and this was with only half of the teachers trained and with many schools employing fewer than the recommended number of teachers per class. Were all teachers to be trained and the recommended ratios to be achieved, the bill for subsidising kindergarten education would probably be more than doubled.

However, it is the author's view that the public should at least demand a policy which could be implemented immediately and would cost much less. The author's suggestion is that the government should apply the formula of assisted private secondary schools, giving assistance in paying part of the teachers' salaries only to non-profit-making kindergartens. The non-profit-making kindergartens are already receiving a government subsidy through reimbursement of rent and rates. Initially, the government could pay 25 per cent of the teachers' salaries, provided that the total salaries of individual

teachers do not exceed the normative salaries. Thus for every three dollars the school pays to the teacher, the government would pay one dollar to enhance the salary of the teacher.

This method of direct subsidy would be simple and would raise teachers' salaries without burdening the kindergartens or the parents. Furthermore, it would provide a right to examine the books of the schools to ensure that the money is well spent. For those private kindergartens who wish to join the scheme, the first step would be to give up the right to make profit out of education. Other private kindergartens which have no fear of competition could continue as before. For the consumers, there would be choices: high class but expensive kindergartens, and a range of less expensive, non-profit-making kindergartens with moderate fees. An assisted private kindergarten scheme would be easy to administer. If the Government later on decided that kindergarten education should be fully subsidised, it would already have the base to proceed, converting the assisted private kindergartens into fully aided ones by stages.

Acknowledgements: The author gratefully acknowledges help from the Education Department for supplying the information on kindergartens. He also thanks Mr. Joe Hong of the Department of Education at the University of Hong Kong for his patience and advice on SPSS. Finally, the author is grateful to Dr. Mark Bray, without whom the paper could not have been completed.

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Appendix Table 1: A Profile of Statistics for All International Kindergartens in Hong Kong (N = 12)

Variable	Mean	Standard Deviation	Minimum	Maximum	N Label
Projected no. of classes 1992	7.08	4.32	1	16	12
Projected enrolment 1992	148.08	106.85	26	387	12
Average fee in 1992	21706.75	7329.74	10934	33200	12
Fee for nursery a.m. classes	22312.83	6554.12	13728	32431	6
Fee for nursery p.m. classes	19770.67	6061.08	13728	25850	3
Fee for lower whole day KG	28362.00	4689.99	24552	33600	3
Fee for lower a.m. KG	20034.70	6696.59	10934	32431	10
Fee for lower p.m. KG	19241.00	5990.11	10934	25850	6
Fee for lower whole day KG	30184.00	4914.22	24552	33600	3
Fee for lower a.m. KG	22827.30	7051.12	12310	33200	10
Fee for lower p.m. KG	21441.00	8302.35	10934	33200	6
Teachers' salaries p.m.	124528 67	83331.02	18385	290610	12
Teachers' provident fund p.m.	5330.63	3486.46	1300	12583	8
Projected salaries Sept. 1992	119024 58	89097.11	2200	301099	12
Projected prov. fund Sept. 1992	5089.25	4637.24	1300	13631	8
Teachers' expenditure	1536989.00	1031997.05	220620	3638316	12
Income from fees	2960685.70	1714082.70	603190	5480200	12
Percentage spent on teachers	61.19	49.67	26.5	206	12
No. of qualified KG teachers	4.50	4.30	0	11	12
No. of qualified asst. KG teachers	1.42	1.93	0	5	12
No. of untrained KG teachers	5.17	5.37	0	19	12
Total no. of teachers	11.08	7.69	1	23	12
Staff:class ratio	1.73	1.21	0.3	5	12
Qualified teacher ratio (%)	56	35	0	100	12

Source: Generated from database files provided by the Education Department.

*Appendix Table 2: A Profile of Statistics for all Private Non-Profit-Making Kindergartens (N = 397)**

Variable	Mean	Standard Deviation	Mini-mum	Maxi-mum	N Label
Projected no. of classes 1992	9.89	5.02	1	29	397
Projected enrolment 1992	268.03	177.11	4	936	397
Average fee in 1992	5253.31	2710.43	1400	36100	397
Fee for nursery a.m. classes	5076.80	2151.11	1870	36100	373
Fee for nursery p.m. classes	5084.37	1407.53	2280	18000	306
Fee for lower whole day KG	10396 14	3322.02	5652	19800	65
Fee for lower a.m. KG	5052.95	1646.86	1400	20750	383
Fee for lower p.m. KG	5027.63	1433.56	1870	18000	306
Fee for lower whole day KG	10619.19	4074.13	565	30000	67
Fee for lower a.m. KG	5078.38	1877.41	1400	27500	376
Fee for lower p.m. KG	5058.68	1443.33	1870	18000	311
Teachers' salaries p.m.	72100.41	47922.62	3000	373617	397
Teachers' provident fund p.m.	4222.44	2740.47	60	18682	319
Projected salaries Sept. 1992	68723.89	45644.46	3000	311006	393
Projected prov. fund Sept. 1992	4091.20	2627.01	60	15542	316
Teachers' expenditure	905919.02	606577.53	36000	4707588	397
Income from fees	1387477.20	1033533.94	5600	7032780	397
Percentage spent on teachers	74.79	38.96	28	643	397
No. of qualified KG teachers	2.83	3.12	0	30	394
No. of qualified asst. KG teachers	3.01	2.66	0	14	394
No. of untrained KG teachers	4.80	3.53	0	20	394
Total no. of teachers	10.63	5.72	0	34	394
Staff:class ratio	1.13	0.43	0	4.5	394
Qualified teacher ratio (%)	53	25	0	100	394

* excluding international and 'other' private kindergartens

Source: Generated from database files provided by the Education Department.

*Appendix Table 3: A Profile of Statistics for all 'Other' Private Kindergartens (N = 307)**

Variable	Mean	Standard Deviation	Minimum	Maximum	N Label
Projected no. of classes 1992	10.04	6.83	1	58	307
Projected enrolment 1992	233.34	218.96	7	2040	307
Average fee in 1992	6450.96	3429.81	1776	34800	306
Fee for nursery a.m. classes	6412.91	3404.55	1776	34800	297
Fee for nursery p.m. classes	6342.50	3013.30	2735	34800	255
Fee for lower whole day KG	13306.10	5130.33	5165	43600	89
Fee for lower a.m. KG	6220.91	3022.77	1776	34800	295
Fee for lower p.m. KG	6297.93	2955.70	2735	34800	255
Fee for lower whole day KG	13367.28	5162.20	516	43600	88
Fee for lower a.m. KG	6254.82	3074.80	1776	34800	290
Fee for lower p.m. KG	6311.81	2978.68	2735	34800	255
Teachers' salaries p.m.	61118.92	62034.53	2450	637706	305
Teachers' provident fund p.m.	3458.48	2625.05	350	14750	123
Projected salaries Sept. 1992	57156.29	54064.27	2450	400846	303
Projected prov. fund Sept. 1992	3342.86	2661.65	350	14010	125
Teachers' expenditure	750163.83	758253.46	29400	7652472	305
Income from fees	1583143.50	1772657.33	18312	16993200	306
Percentage spent on teachers	55.94	22.75	15	183	305
No. of qualified KG teachers	1.15	1.63	0	11	303
No. of qualified asst. KG teachers	2.32	2.71	0	21	303
No. of untrained KG teachers	7.22	6.06	0	49	303
Total no. of teachers	10.69	8.37	0	56	303
Staff:class ratio	1.08	0.50	0	4.8	303
Qualified teacher ratio (%)	33	24	0	100	303

* excluding international and private non-profit-making kindergartens

Source: Generated from database files provided by the Education Department.

Appendix Table 4: A Profile of Statistics for 20 Highest Income Private Non-Profit-Making Kindergartens (N = 20)

Variable	Mean	Standard Deviation	Mini-mum	Maxi-mum	N Label
Projected no. of classes 1992	19.35	4.75	12	29	20
Projected enrolment 1992	643.30	181.26	340	936	20
Average fee in 1992	7080.20	2346.56	4680	13170	20
Fee for nursery a.m. classes	6994.79	2201.71	4680	13170	19
Fee for nursery p.m. classes	7011.58	2189.09	4680	13170	19
Fee for lower whole day KG	13225.33	2930.54	11550	19074	6
Fee for lower a.m. KG	6885.47	2238.69	4680	13170	19
Fee for lower p.m. KG	7231.94	2509.46	4680	13170	17
Fee for lower whole day KG	13225.33	2930.54	11550	19074	6
Fee for lower a.m. KG	7213.18	2523.59	4680	13170	17
Fee for lower p.m. KG	7096.15	2334.73	4680	13170	20
Teachers' salaries p.m.	193015.10	67126.67	82193	373617	20
Teachers' provident fund p.m.	9727.00	4274.88	3873	18682	20
Projected salaries Sept. 1992	182491.74	59676.06	81229	311006	19
Projected prov. fund Sept. 1992	9367.05	3591.29	4063	15542	19
Teachers' expenditure	2432905.20	851083.63	1032792	4707588	20
Income from fees	4293267.10	1134660.20	3095400	7032780	20
Percentage spent on teachers	57.06	14.62	28.1	83.4	20
No. of qualified KG teachers	9.40	7.47	0	30	19
No. of qualified asst. KG teachers	6.45	4.37	0	14	19
No. of untrained KG teachers	7.20	4.96	0	20	19
Total no. of teachers	23.05	8.45	0	34	19
Staff:class ratio	1.20	0.47	0	1.9	19
Qualified teacher ratio (%)	69	17	29	100	19

Source: Generated from database files provided by the Education Department.

Appendix Table 5: A Profile of Statistics for 40 Highest Income 'Other' Private Kindergartens (N = 40)

Variable	Mean	Standard Deviation	Mini-mum	Maxi-mum	N Label
Projected no. of classes 1992	21.95	9.51	6	58	40
Projected enrolment 1992	636.73	330.47	156	2040	40
Average fee in 1992	8996.80	4288.05	5220	24440	40
Fee for nursery a.m. classes	9080.56	4493.00	5220	23400	39
Fee for nursery p.m. classes	8256.61	3133.32	5220	20130	36
Fee for lower whole day KG	15906.43	4403.56	936	25200	14
Fee for lower a.m. KG	7915.32	2514.82	5220	16720	34
Fee for lower p.m. KG	8076.64	2552.93	522	16720	36
Fee for lower whole day KG	15906.43	4403.56	936	25200	14
Fee for lower a.m. KG	8034.33	2651.30	5220	18440	36
Fee for lower p.m. KG	8011.97	2683.22	5220	18440	35
Teachers' salaries p.m.	175936.18	94611.30	72095	637706	40
Teachers' provident fund p.m.	7247.91	3145.14	3320	14750	22
Projected salaries Sept. 1992	164351.36	69449.41	63500	400846	39
Projected prov. fund Sept. 1992	7282.68	3355.58	3270	14010	22
Teachers' expenditure	2159070.30	1134907.75	908388	7652472	40
Income from fees	5135122.30	2518635.20	3008400	16993200	40
Percentage spent on teachers	42.54	9.04	27	66	40
No. of qualified KG teachers	3.50	2.77	0	11	39
No. of qualified asst. KG teachers	5.58	4.46	0	21	39
No. of untrained KG teachers	17.25	8.75	0	56	39
Total no. of teachers	26.33	10.37	0	56	39
Staff:class ratio	1.36	0.80	0	5	39
Qualified teacher ratio (%)	34	17	0	68	39

Source: Generated from database files provided by the Education Department.

Appendix Table 6: A Profile of Statistics for Private Non-Profit-Making Kindergartens with less than 50 per cent Income spent on Salaries (N = 38)

Variable	Mean	Standard Deviation	Mini-mum	Maxi-mum	N Label
Projected no. of classes 1992	10.79	4.52	2	16	38
Projected enrolment 1992	334.71	176.06	40	606	38
Average fee in 1992	5409.34	2484.58	3000	18000	38
Fee for nursery a.m. classes	5287.79	2339.83	3228	18000	34
Fee for nursery p.m. classes	5286.74	2451.08	3228	18000	31
Fee for lower whole day KG	8151.00	0	8151	8151	1
Fee for lower a.m. KG	5458.51	2500.04	3000	18000	37
Fee for lower p.m. KG	5306.76	2402.48	3228	18000	33
Fee for lower whole day KG	8151.00	0	8151	8151	1
Fee for lower a.m. KG	5474.46	2485.77	3228	18000	37
Fee for lower p.m. KG	5288.88	2417.80	3000	18000	33
Teachers' salaries p.m.	60009.08	28341.90	4500	103450	38
Teachers' provident fund p.m.	3602.15	1058.27	1736	5062	26
Projected salaries Sept. 1992	57711.05	27991.71	4500	103450	38
Projected prov. fund Sept. 1992	3393.54	1075.34	1500	5086	26
Teachers' expenditure	749684.53	356245.82	54000	1275816	38
Income from fees	1695912.70	813692.50	120000	2988172	38
Percentage spent on teachers	44.36	4.33	34.5	49.6	38
No. of qualified KG teachers	1.71	1.25	0	5	38
No. of qualified asst. KG teachers	2.63	1.75	0	6	38
No. of untrained KG teachers	6.13	4.66	0	18	38
Total no. of teachers	10.47	4.87	1	20	38
Staff:class ratio	1.00	0.33	0.5	2.2	38
Qualified teacher ratio (%)	48	27	0	100	38

Source: Generated from database files provided by the Education Department.

Appendix Table 7: A Profile of Statistics for 'Other' Private Kindergartens with less than 30 per cent Income spent on Salaries (N = 22)

Variable	Mean	Standard Deviation	Minimum	Maximum	N Label
Projected No. of classes 1992	10.59	6.08	3	24	22
Projected enrolment 1992	279.55	192.24	65	719	22
Average Fee in 1992	9355.86	7205.42	4464	34800	22
Fee for nursery a.m. classes	9024.59	6954.36	4464	34800	22
Fee for nursery p.m. classes	8118.37	6662.69	4464	34800	19
Fee for lower whole day KG	15180.67	4404.96	10320	23400	9
Fee for lower a.m. KG	8223.65	6462.21	4464	34800	20
Fee for lower p.m. KG	8107.39	6855.68	4464	34800	18
Fee for lower whole day KG	15314.00	4616.22	10320	23400	9
Fee for lower a.m. KG	8019.05	6572.40	4464	34800	19
Fee for lower p.m. KG	8107.39	6855.68	4464	34800	18
teachers' salaries p.m.	49692.23	46172.35	7200	198510	22
Teachers' provident fund p.m.	3225.50	1822.24	787	5191	4
Projected salaries Sept. 1992	47733.38	52358.56	7200	242746	21
Projected prov. fund Sept. 1992	2600.40	1952.96	574	4957	5
Teachers' expenditure	603344.18	561755.72	86400	2382120	22
Income from fee	2342797.70	1924458.03	290160	8598810	22
Percentage spent on teachers	24.82	4.73	15	29.8	22
No. of qualified KG teachers	0.68	1.46	0	5	21
No. of qualified asst. KG teachers	0.73	1.03	0	3	21
No. of untrained KG teachers	8 18	6.32	0	23	21
Total no. of teachers	9.59	7.50	0	30	21
Staff:class ratio	0.88	0.35	0	1.7	21
Qualified teacher ratio (%)	18	25	0	100	21

Source: Generated from database files provided by the Education Department.

Private Schools in Hong Kong: Historical Patterns and Contemporary Issues

Cheung Chi Kim

In the early years of the history of Hong Kong, the government took few initiatives in education, and most schools were established by missionaries. Government involvement increased in the late 19th and early 20th century, but even in the period following World War II it remained small. In 1955, for example, education was allocated just 4.0 per cent of the total government budget (Hong Kong 1956, p.241); and a decade later it consumed only 4.5 per cent (Hong Kong 1966, p.282). Only in recent years has the increase been significant, with the allocation reaching 16.0 per cent in 1991 (Hong Kong 1992, p.128).

In the absence of a strong government role, much of the burden of education in the past was undertaken by private schools. This paper focuses mainly on the secondary school sector. It begins with a sketch of private education from the time of British take-over. It then describes contemporary problems and conflicts. The paper notes arguments in favour of and against government involvement, and comments on probable future policies.

THE HISTORY OF PRIVATE SCHOOLS

At the time that Hong Kong became a British colony, the local community was a small fishing village of which most residents were Chinese and had more or less the same values as Chinese in the mainland. In the aspect of education, there was no major difference.

Ssu-shu (the Chinese name for the traditional schools rooted in China where *ssu* means private and *shu* means school) had long existed throughout China. They were mostly small, and were privately owned. Some *ssu-shu* existed in Hong Kong before the British take-

over, and continued to provide some basic traditional teaching to the children of Hong Kong (Luk et al. 1984). However, it was not until the colonial period that western-type schools were established in the territory. They were sponsored by religious organisations such as the Roman Catholic Church, the London Missionary Society and the Church of England. The government started to build its schools in 1858.

In the early years, government efforts were not very successful. One reason noted by Ng (1984, p.52) was that education was considered by the Chinese to be a concern of the family rather than a responsibility of the state. Also, those who wanted a traditional education for their children would have them tutored privately at home or sent to the private small classes where the curriculum and schedule could be individually arranged.

Because of problems faced by the government's own village schools, the authorities decided against direct expansion and instead turned to the mechanisms to control existing institutions. This was done through a grant-in-aid system, with grants paid according to the reports of inspectors on the discipline, organisation, facilities and performance of the schools. The 1912 Barlow Report stated that supervision was badly needed in the majority of the private schools (Sweeting 1990, p.283). As a result, in 1913, the government introduced the first Education Ordinance "to provide for the registration and supervision of certain schools". In 1929, the government further strengthened its control by appointing a committee to draw up a syllabus for the private schools.

The next major initiative came with the 1935 Burney Report. It addressed issues of private vernacular education, and suggested (p.6) that the government was "giving least help to those who are least able to help themselves". The report urged the government to run vernacular schools and set up models for the private schools to follow.

After World War II, the population increased markedly. Public schools were unable to meet demand, and the private sector expanded significantly. The government, seeing its own inadequacies, encouraged aided and private schools at all levels. At the end of 1950, private institutions comprised 62 per cent of schools and catered for 67 per cent of pupils. During that year, 105 new private schools had been opened. The majority gave only primary education, but 60 had middle school classes (Hong Kong 1951, p.51). However, the government feared that if private schools had too much freedom and were managed by people with little or no educational experience, the

people could easily became prey to politically sponsored groups. The Education Ordinance was amended to deal with this possibility, and greater control on private schools was exercised.

One recommendation of the 1951 Fisher Report was that the government should offer to pay the fees of certain children in selected private schools. At first the authorities rejected the recommendation, but in 1960 the government began a scheme along the lines set out in the Fisher Report.

Three years later, R.M. Marsh and J.R. Sampson of the Hampshire County Council (UK) visited Hong Kong to serve as an Education Commission. Their report contained many detailed comments on private education. It stated that there were 342 private schools with 94,200 students who formed 72 per cent of all students receiving some form of secondary education. The report continued (Marsh & Sampson 1963, p.30):

> These figures speak for themselves and government has recognized that the private schools are an indispensable part of the educational system and that they will continue to educate a large proportion of the children of Hong Kong for many years to come.
>
> Some of the schools are excellent -- premises are good with a high standard of teaching, and general efficiency is maintained.... [The only problem] is to consider what steps (if any) should be taken by government to encourage and give a definite lead and incentive to the schools which aim at high standard.

However, the government still did not give much help to private schools during the 1960s.

New provision in 1971 allowed for assisted three-year secondary school places for 50 per cent of the relevant age group (Hong Kong 1971, p.71). Students not allocated places in government or aided schools under the Central Allocation Scheme were sent to private schools for three years of junior secondary education. The government paid the students' fees.

In 1974, three years after the introduction of universal primary education, the White Paper *Secondary Education in Hong Kong over the Next Decade* promulgated the government's intention to extend the provision of universal education from six to nine years by 1979 (Hong Kong 1974, p.3). It resulted in a great increase in secondary school enrolment, particularly in private schools. For example, between 1974 and 1975 the increase in enrolment in private schools was 36,300 whereas it was only 8,500 in aided and government schools

(Lee 1991, p.166).

In 1977, the Governor, Sir Murray MacLehose, announced that Hong Kong would begin to provide a further three years of free and compulsory universal education up to the age of 15 in 1978, one year earlier than originally planned. In order to have enough provision, the government started to buy places from private schools.

Then a White Paper entitled *The Development of Senior Secondary and Tertiary Education* was published in 1978. It proposed that about 60 per cent of the 15-year-old population should be given subsidised senior secondary places starting in 1981, and that the figure should increase to 70 per cent by 1986. Again, places were to be bought in private non-profit-making schools.

In 1980, the Board of Education recommended that private independent schools be allowed to increase fees to permit improvements in standards. It was believed that with free and compulsory junior secondary education, the government had an obligation to ensure that all places within the public sector, including the bought places in private schools, met certain minimum standards.

In 1981, the government decided to seek help from the Organisation for Economic Co-operation and Development (OECD) to help to review and plan the educational situation in Hong Kong. A panel chaired by Sir John Llewellyn was invited to do the job. The 1982 Llewellyn Report suggested (p.51) that "the private independent schools are generally of low quality and there is no effective policy to remedy this either by upgrading or by closure".

In 1985, the government announced that it would stop buying places from private schools, and the following year began its three-phase 'reduction programme'. *Education Commission Report No.3* recommended (1988, p.57) that the phasing out of the bought-place scheme should be completed by the year 2000.

In implementing the phasing out policy, the private schools were to be assessed by six criteria devised by the Education Department in consultation with the Independent Commission Against Corruption (ICAC). The six criteria focused on staff qualifications, school administration, facilities, premises, acceptance of the schools by parents and students, and activities offered.

In March 1985 the government identified the first batch of schools in which bought places would begin to be phased out from the following year. Three months later, a Working Group under the Private Schools Association's Advisory Board was set up by the Director of Education to "examine the possibility of further measures of assistance which could be taken to enable the private schools to

improve the quality of education they were providing" (Working Group 1985, p.3). The Report proposed (p.3) that:

> Private schools which can provide places of acceptable standard will remain within the public sector through their bought place which, as recommended, will also be increased to include Form 4 and 5 places. Also, private independent schools participating in the bought-place scheme can also change their status to non-profit-making institutions so that they can become eligible for conversion to aided status or for the allocation of new aided schools in the developing areas.

Table 1: Number of Secondary Schools, 1983-91

	1983	1985	1987	1989	1991
1. Day Schools					
Government*	35	36	36	40	42
Aided	269	281	300	310	324
Private	114	103	93	77	76
2. Evening Schools					
Government	1	1	1	0	0
Private	107	90	76	62	45

* Not including the Practical Education Centre opened in September 1986.

Source: Education Department (1992), p.7.

This policy was consistent with the recommendation of *Education Commission Report No.1* (1984, p.17). The government started planning to provide sufficient subsidised post-Form 3 education opportunities for students.

Table 1 shows that the number of private schools began to fall after the introduction of the phasing-out policy. In 1990, the Direct Subsidy Scheme (DSS) was introduced to enable private schools with required standard to join a direct grant scheme through which they will receive public funds according to a sliding scale.

DIFFERENT TYPES OF PRIVATE SCHOOL

In September 1992 there were four types of private secondary school in Hong Kong (Education Department 1992). The total number of private secondary schools was 92. The first type were called Assisted Private/Caput Schools. Only one Assisted Private School existed, which received government assistance in the form of a classroom allowance and also offered bought places in secondary 1 to 7. This was the Kiangsu Chekiang College. In 1993 this institution decided to join the DSS, a transition which spelled the end of the Assisted Private Schools category.

Caput Schools receive government assistance through per capita grants, and offer bought places. There were 10 caput schools in September 1992. Examples are Confucius Hall Middle School and Hong Kong Sam Yuk Secondary School.

The second type of private school is of institutions with bought places. These places are bought by the government for allocation to pupils as part of the public provision of education. There were 20 such schools in September 1992, of which Wai Kiu College and Amoy College are examples.

The third type comprises schools in the DSS. In September 1992 there were six local DSS schools, including Hon Wah Middle School and Pui Kiu Middle School. In addition, four international schools were part of the DSS, including the Chinese International School and the German-Swiss International School.

The final group comprises schools which are run by the private sector with no subsidy from the government. In September 1992 there were 37 such institutions, exemplified by Tsung Tsin Middle School and Chung Sang Middle School. This sector also included 14 international schools, including the Indonesian School and the Norwegian School.

THE PROS AND CONS OF PRIVATE SCHOOLS

Six main arguments may be advanced in favour of private schooling. One of the most compelling is based on the claim that the private sector is more efficient than the public sector. Advocates of privatisation commonly assert that a stronger educational marketplace results in more efficient provision than a government educational monopoly.

Moreover public schools, being government funded, have to

operate within complex bureaucratic settings. They are, in Chubb & Moe's terms (1986, p.22) "administrative subordinates in a very complex system of political authority and control". Private schools, by contrast, have more freedom and flexibility in terms of policy making. This is related to arguments about decentralisation. Some people advocate privatisation because of a belief in free markets and a mistrust of central control.

Thirdly, it has been argued by the World Bank (1980) that plans for extending education opportunities, improving the quality of education, and building natural capacity in management, planning and research are often hampered by the limited resources devoted to education. Rather than begging for more resources from the government, the argument goes, private schools can raise their funds from parents who would like to see their children study in schools with more facilities, better teacher qualifications, and excellent academic performance.

A fourth argument is based on freedom of choice. Blaug (1987, p.199), for example, suggests that "if we value freedom more than equality, we must tolerate private schools whether we like it or not". Individuals in democratic societies in which incomes are not equally distributed are allowed to use their money to buy private privileges such as cars, houses and medical care. Advocates of private schooling ask why this should not be extended to education.

A fifth argument goes with the diversity of orientation. Government operation of schooling tends to lead to uniformity of provision. Private schools may cater for different political, religious and other orientations, and thus are more pluralistic.

The final argument concerns academic quality. Coleman (1968) and associates have asserted that private schools may be more effective than public schools at producing academic achievement gains among comparable students.

Yet whatever the claims about private education, there are of course alternative viewpoints. One is that although private education may increase efficiency, promote diversity and encourage technical dynamism, this is not always an outcome. Moreover, in a competitive environment the public may not have the necessary information to judge whether the advertisements are valid or not. Hong Kong's newspapers have carried many advertisements from private schools, both local and foreign. Many students register only to find out later that the institutions do not live up to their claims. It takes a great deal of time, effort and money for potential students to distinguish the 'real' schools from fake ones.

Secondly, critics of private schooling assert that the institutions maintain a vicious circle through which rich parents may send their children to good schools while poor parents can only send their children to inferior institutions. In 1948, the United Nations adopted its Universal Declaration of Human Rights (United Nations 1967). Article 26 states:

> Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages.

Of course in a free-education system, public money is given to the rich as well as to the poor; but at least both groups have the right to be educated. If private education is the norm, the poor may not have the chance to be educated at all. This requires safeguards and subsidies for social equity.

Thirdly, it is still debatable whether the academic results of students in private schools are necessarily better than those in public schools. Coleman's work raised some doubts (James & Levin 1988); and even when results are better in private schools, in at least some cases this reflects the selection of students rather than the process of schooling (Willms 1988).

Finally, Walford (1990, p.104) has argued that parents might not always be the best judge of what is good for their children. Private schooling implies parental choice. Walford believes that this can have a detrimental narrowing effect on the schools themselves, because choices between schools might be made on the academic performance of students which in turn leads to a greater concentration on examination results at the expense of less quantifiable social and personal development issues.

THE ALTERNATIVES

One important mixed model of private schooling and public subsidy is the Direct Subsidy Scheme. Because the nature of the scheme and the issues which it raises are discussed at length by Tan elsewhere in this volume, it is not necessary to elaborate here.

Other institutions have strong overseas links, and send most of their graduates to universities in foreign countries. The SEA Canadian Overseas Secondary School is an example. Its curriculum is linked to that of Ontario, and the school's qualifications are recognised by universities in Canada. Other institutions aim at an

international curriculum. The Sears Rogers International School is in this category. Teachers are recruited both locally and abroad. These institutions usually have high fees and excellent facilities.

Other models which are used elsewhere and which may have some relevance to Hong Kong include the corporate/community school in the United States. This model is an arrangement through which private resources are provided as supplements to the public system.

One such school was founded by Joseph Kellman, president of Globe Glass & Mirror Co., in partnership with Vernon Loucks, chairman and chief executive officer of Baxter International. It is a business-sponsored elementary school for poor children in Chicago, and is free of charge. Its costs per student are in the same range as those of the Chicago public schools. The school was founded because its initiators noted that the public school system was not working efficiently and that many students dropped out. They feared that in the long run Chicago would suffer because there would not be enough employees with the necessary skills (Kellman 1992). Large companies including Sears, Quaker Oats, Commonwealth Edison, Johnson Publishing Company, McDonald's, and United Airlines agreed to help sponsor the project, and the school has gained wide publicity.

Hong Kong does not have a tradition of this type, and most large companies consider financing of education to be the job of the government. Some do donate money for buildings or other capital expenses, but they seldom participate in the running of schools. Money is usually provided on a one-shot basis, and although buildings may be named after donors, ongoing relationships are generally minimal.

The question is then is whether companies can and should be persuaded to undertake greater involvement. Brian Renwick (1992, p.3), Senior Manager in the Personnel Department of the Hong Kong Bank is one strong critic of the Hong Kong education system:

> Society does not seem to have persuaded its education system to deliver instruction in, and assessment of, the necessary skills. If students acquire them through the academic process, they do so by accident or coincidence. Students get their "life-skills" later, or, if they happen to think of it, by the few means available to them during their academic life.

One might feel that if the business world feels that the graduates are not up to the required standard and blames the schools, perhaps the

business world should participate more in the education system. Some may say that the problem is in the curriculum. But if so, one may still ask who will initiate the changes: the curriculum planners who may not have much experience in the business world or the businessmen who think they know exactly what is needed?

Another way to tap resources from business is through cooperation programmes in which both parties benefit. In some countries work-study programmes have become well-established and effective. The students learn in the real world, and are paid during the process; and the companies gain both temporary and often long-term manpower. In many cases, companies donate money for research and development. The firms do not directly run the schools, but do play a part in shaping the education of future graduates. Although this system has worked well in parts of the United States and Canada, it has not been popular in Hong Kong. One reason is that it requires flexibility that is difficult to achieve in Hong Kong's examination-dominated system. However, this may change in the future.

Institutions can also find ways to form effective partnerships. One local example which does stand out concerns the King George V (KGV) School. This institution signed a contract with the Open Learning Institute (OLI) through which the school provides classrooms for the OLI and in return, the latter has installed computers in the classrooms. Students from KGV use the computers during school time, and students from the OLI use them during weekends.

Other schools rent their premises out in the evenings. For example, Ling Liang primary school once rented its premises to the Hong Kong Students' Association (a private tutorial school). St. Louis Evening School (another private tutorial school) donated a sum of money to build a playground in St. Louis Secondary School in return for use of the premises during the evenings.

Finally, Hong Kong parents commonly employ private tutors for their children or send them to tutorial schools for additional studies. Many evening tutorial schools attract students who pay 10 times the fees that they pay in the morning schools, hoping to learn more in order to pass the examinations. The market is out there. What private schools should do is to see what the government and aided schools cannot change. For example, teacher qualification is more or less the same among schools and facilities provided are of no major difference. If the private sector can identify such weaknesses and provide an alternative, then they have found a niche which will benefit all concerned.

CONCLUSION

When the British first took over Hong Kong, the colonial government paid little attention to the education sector. The gap was bridged by private institutions. The 1913 Education Ordinance was an important watershed, but the government role remained limited. Only in the last few decades has the situation changed significantly.

The 1978 introduction of nine-years' free and universal education required the government to buy junior-form places from private schools because there were not enough places in the aided and government schools. Private schools continued to flourish, but they were used as a buffer to meet the government's obligation to provide education for every child. The long term policy did not offer tremendous help to private schools, and the government now plans to phase out the bought-place scheme by 2000.

If private schools wish to survive, besides requesting more help from the government they should try to upgrade their quality to attract more students. Upgrading may require a lot of money, but expensive education does have a market not only in Hong Kong but also in China.

Reaching a somewhat different market, many evening tutorial schools attract hundreds of students wishing to receive some quality teaching to help them pass examinations. In many cases these students are from the mainstream, seeking supplementary help. In some cases, however, the private schools provide a more specialised service, such as coaching for the TOEFL tests. Private schools can often provide such needed services in a more flexible way than public institutions.

Unlike the 1960s and 1970s where the economy in Hong Kong had only started to grow and the number of children in the family was many, resulting in a genuine desire to receive free education, people now have fewer children and are more willing to pay for valuable things, including education. At least some parents are willing to pay high fees to send their children to international schools where facilities are better and class size is smaller. The implication is there is still a market for private schools only if they could exhaust more avenues to attract students. On the other hand, the government could encourage the establishment of private schools with limited control which may lead to an increase in motivation for the public schools to excel.

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Unit Costs in Higher Education:

Some Comments and Comparisons between Hong Kong and the United Kingdom

Roy Butler

The launch of the 'Financial Management Initiative' by Michael Heseltine, when he was a Minister at the Department of Trade and Industry in the UK Conservative government in the 1970s, was among early signs of the worldwide tendency for those in charge of spending public funds to take more interest in what they get for their money. This has found expression in many countries in a demand for greater 'accountability'. In turn it has taken the form of a concern first with costs and means by which they might be reduced, and subsequently with 'value for money'. The latter has tended to be interpreted primarily in quantitative terms, but now increasingly has a qualitative dimension too.

As a result of this trend, UK Local Authorities have been obliged to record and publish details not only of how often household rubbish bins are emptied, but also of how clean the streets are afterwards. Hospitals are urged not only to reduce the time patients stay with them, but also to publish a 'Patients' Charter', against which the quality of a patient's experience can be evaluated. And the Department of Social Security has published details of the quality of service which its 'clients' can expect of it.

In the UK, higher education was been incorporated in this trend only slowly and reluctantly. Evidence from Australia and New Zealand suggests a similar pattern of a traditionally conservative academic community being harassed by a strident government along managerial paths which it has successfully resisted for the last 50 years at least. Now, however, even in the UK, institutions vie with each other to demonstrate that the disciplines of 'Total Quality Management' can be successfully applied to universities and colleges.

In Hong Kong, the path trodden in the UK has inevitably been followed fairly closely. This has been ensured by a preponderance of UK-trained civil servants and of UK-based management consultants (whose role in events in the UK has gone largely unsung and underestimated), and a significant proportion of UK members on the University and Polytechnic Grants Committee (UPGC). However, equally inevitably there is a time lag, and so institutions find themselves only now being told by the UPGC that they must address questions relating to value for money.[1] Questions relating to quality are not yet formally on the agenda for the universities in Hong Kong, though the Hong Kong Council for Academic Accreditation (HKCAA) regards 'quality assurance' as part of its mission in respect of the non-university institutions.

For the moment, therefore, the focus in Hong Kong is primarily on costs, which is how it started in the UK. What we do not have, however, is very much information about costs. Nor is the information available in a form which makes inter-institutional comparisons possible, even within Hong Kong. What follows, therefore, is primarily a discussion of some difficulties surrounding the concept of unit costs, and some problems associated with their use and interpretation.

WHAT COSTS?

A sensible paymaster (e.g. a government) would say to a higher education institution or system either:

- "I want so many graduates of this type and of this quality and I will pay you so much per graduate", or
- "I wish you to provide this many places in higher education for our citizens, and I will pay you so much per student".

The paymaster would then leave the (ostensibly autonomous) institutions to get on with it. On this basis, both institutions and governments could focus on *total* institutional costs, institutional autonomy would be maximised, government interference would be minimised, and the question of costs could be sensibly subsumed within a proper concern for value for money. ("Have you produced the number of graduates you contracted to do, and are they of the right quality?")

Governments tend, unfortunately, not to be very sensible paymasters. In particular, they concern themselves too much with

detail and as a result with the costs of individual aspects of the institution's operations, rather than with the whole. Thus the costs of staff, for example, are of interest to government -- and of senior staff in particular, with the result that institutions' freedom to manage their resources to what seems to them to be best effect is unreasonably inhibited by the imposition of devices such as 'senior:junior ratios'.[2] Staff:student ratios are also a matter of comment and concern, as are items such as the percentage of total institutional expenditure on libraries, computers and administration.

As a result of this factor, amongst others, there has developed in the UK a range of performance indicators, of which 'unit costs' are a prominent example. This has enabled some interesting comparisons to be drawn between the UK and Hong Kong. The best known of the UK statistics are published by the UK Committee of Vice Chancellors and Principals and the University Grants Committee (subsequently the Universities' Funding Council, and currently the Higher Education Funding Council).[3]

COMPARABILITIES

It is unusual for there to be for any performance indicator a generally accepted value, departure from which is accepted as cause for further enquiry. In the absence of a 'norm', therefore, reference is usually made to other comparisons. Most frequently it is either to the performance of comparable institutions or individuals, or to the same institutions or individuals over time.

The first problem is to establish which institutions are truly comparable. This breaks down into two basic questions:

1. Are the characteristics of the institutions concerned sufficiently similar to permit the assumption that, other things being equal, their performance on any particular indicator (e.g. costs) will also be similar?
2. Are the accounting conventions employed by the institutions such that similar expenditures will be treated in similar ways, so as to display similarities in costs?

The latter question bedevilled early attempts in the UK to establish inter-institutional comparators. However, in due course a set of conventions was drawn up and published as 'recommended practice', and most UK universities now adhere to them.[4] Com-

parisons between UK and other (e.g. Hong Kong) institutions are made much easier if the UK accounting conventions are followed. To this author's knowledge, the University of Hong Kong (HKU) is the only local institution to do so.

The first of the two questions above is much more a matter of judgement than the second. There are disparities enough between UK institutions to make comparisons hazardous: the ancient and the modern, the large and the small, the civic and the rural, those with and those without 'professional' faculties, such as Law, Medicine, Dentistry, Veterinary Science and Architecture. How much more plausible are claims of incomparability when the institutions are located in another country. Yet anyone who knows the institutions concerned would be likely to agree that HKU, for example, is in many respects much more like a large British civic university such as Birmingham, Leeds, Liverpool, Newcastle or Sheffield than it is like the Chinese University of Hong Kong (CUHK), with its four-year degree course and its collegiate structure.

So, two characteristics of HKU conveniently coincide to make comparisons with UK institutions both possible and relevant. It employs the same accounting conventions; and the structure and range of its academic programmes, and the method of its governance and administration, are such as to give rise to a reasonable *prima facie* expectation that, other things being equal, it will show similar values on some of the most important indicators including unit costs.

UNIT COSTS

Reference was made above to the virtues of *total* institutional costs as a basis on which governments could and should most usefully finance higher education institutions. They are not the best basis, however, for making inter-institutional comparisons, particularly across national boundaries. In Hong Kong, not only is the general level of salaries higher than in the UK, but the level of benefits and other 'on-costs' is such that staff costs in general are bound to be higher than those of otherwise comparable institutions in the UK. Since over 75 per cent of the costs of a higher education institution are attributable to the costs of staff, an attempt at comparison based on *total* institutional costs would be a serious distortion at the outset.

In addition, such a comparison would make no allowance for the different proportions in different institutions of more costly and less costly disciplines. Thus, other things being equal, an institution like

the University of Liverpool, which has Faculties of Dentistry, Medicine and Veterinary Science (all of which are relatively costly subjects), would have higher institutional costs per student than the London School of Economics, which teaches only the (relatively inexpensive) Social Sciences and some Humanities.

The way to avoid such problems is to focus on the costs of individual disciplines at individual institutions, rather than on the overall costs of the institutions themselves, and to exclude the major on-costs, such as housing, passages, leave, the University Medical Service, etc.. In this way one can get nearer to a comparison of like with like -- the true costs of teaching and of research in a specific subject area.

The key to this is, in the first instance, the expenditure on recurrent items of individual academic departments. This comprises expenditure on the salaries, wages and superannuation of both academic and non-academic staff in the department, together with expenditure on consumables (i.e. postage, stationery, telephone, travel, entertainment, laboratory supplies, etc.), but excluding equipment (which is classified as capital expenditure) and heat, light, power, water, etc. (which tend to be accounted for centrally). The expenditure concerned is confined to that which is made from general university funds and therefore with some exceptions excludes expenditure of funds which have been received for specific purposes, such as to conduct a particular piece of research.

The resultant expenditure is then divided by the student load of the Department, which is intended to represent a measure of the amount of teaching a department does. The final figure is taken to represent the cost per student of the Department, or, more simply, its unit cost.

PROBLEMS WITH UNIT COSTS

The method for calculating unit costs has some obvious drawbacks. First, the costs of teaching are hopelessly entangled with the costs of research, in both of which a major component is the time of academic and other staff. In the UK an attempt has been made to cope with this difficulty by separating the *financing* of research from that of teaching, but this does not altogether solve the problem of separately *accounting* for expenditure on each of them. (One effect which it will have, however, as departments in UK universities come increasingly to be financed differentially for teaching and for research,

is to make comparisons with institutions such as HKU rather less relevant then at present.)

Two further problems also arise. First, the costs per student can obviously be influenced as much by a change in the number of students as by a change in the level of expenditure. Second, no account is normally taken of the different costs generated by different classes of student within the same department. Part-time students may appear to cost less than full-time students, but is it always the case that postgraduate students cost more than under-graduates, and do research students cost less or more than taught postgraduates? Also, are the answers to these questions the same for all disciplines?

No one has yet satisfactorily resolved the problem of how to address these questions, let alone found answers to them. This is partly due to the intrinsic difficulty of the problem. It is also partly a reflection of the deep aversion of academics, and the institutions of which they are part, to believe that such questions are worth asking, or that it is worth academics' time helping to answer them. It is notable, as a result, how little attention the professional academic economist, or teacher of management, has paid to the very real problems of managing universities and their costs.

STUDENT LOAD

As indicated above, 'student load' is intended to represent a measure of the amount of teaching which a department does, and its measurement is crucial to the calculation of unit costs. However, the calculation of student load itself poses some problems.

The principle is that each student represents a single unit,[5] and that fractions of this unit are distributed to the departments which teach the student in proportion to the fraction of the total teaching received from each department. Thus a student who receives a total of 12 hours' teaching per week, contributed equally by two departments (Departments A and B), will represent 0.5 of a unit of student load on each department. The aggregate of such fractions accumulated by a department is referred to as full-time equivalent (FTE) student load.

The problem arises when the 'normal' load of a student in Department A is, say, only eight hours teaching per week, whereas that in Department B is 12. If Department A contributes four hours' teaching to a student from Department B, then, although in Department B's terms, this represents only in 0.33 of an FTE, to Depart-

ment A its value is 0.5 FTEs. The scope for argument in the allocation of student load between departments is enormous.

There is a temptation, in the light of these difficulties, to move away from the concept of full-time equivalence in the direction of student contact hours. However, this tends to encourage departments to increase the number of such hours merely in order to increase their student load figures. Similarly, 'staff contact hours' has the effect of increasing the costs of teaching by providing an incentive for reducing the size and increasing the number of classes attended by the student. It is therefore equally to be avoided (although it is a useful measure of other things, such as how much teaching the staff of a department actually do).

Student unit costs are thus a very unsatisfactory measure. They represent nevertheless an essential element in the armoury of those who wish to attack universities, of those who wish to defend them, and of those who wish merely to manage them. This is because no better measure exists of the rate at which resources are being expended on a task which is only half understood, namely that of teaching students and undertaking research in a given academic discipline.

SOME EXAMPLES

Tables 1-5 show, by 'cost centre',[6] for HKU on the one hand and the generality of UK universities (excluding Oxford, Cambridge and London)[7] on the other, for the years 1984-90. The figures do not necessarily reflect the present level of resourcing of HKU, but help make several points.

The tables represent a considerable volume of data, and the first problem is how to make sense of it. In particular, given the different costs of living in Hong Kong and the UK and the varying fortunes of the pound/dollar exchange rate over the period in question, how can comparison be made meaningful?

An ingenious solution was devised by the Professor of Statistics at HKU, Richard Cowan, who decided that the most illuminating starting-point would be to compare:

a) the extent to which the costs of a particular cost centre in HKU diverged from the *average* in HKU, with
b) the extent to which the costs of the same cost centre in the UK diverged from the *average* in the UK.

Table 1: Unit Costs at the University of Hong Kong 1984/85-1989/90 (HK$)

Cost Centres	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
01 Clinical medicine@	95,397	111,918	118,944	132,039	164,607	198,488
02 Clinical dentistry	109,109	141,327	164,452	171,151	208,073	282,679
04 Anatomy & physiology	83,180	88,996	102,845	107,351	115,587	134,406
05 Pharmacology	109,130	114,617	171,730	178,188	190,063	231,942
08 Other studies allied to medicine	0	0	0	0	208,716	163,690
09 Biochemistry	75,222	82,703	91,202	86,327	96,140	101,470
10 Psychology	33,491	34,746	35,957	37,720	40,602	45,111
11 Other biol. sciences	61,554	71,178	77,752	83,150	84,193	87,536
14 Chemistry	47,555	44,400	47,534	45,653	51,478	61,053
15 Physics	46,060	43,479	46,003	47,538	58,602	69,346
16 Other physical sci's	34,644	39,178	51,934	60,478	61,841	61,543
17 Mathematics	31,477	34,078	33,198	33,645	44,378	46,077
18 Computing	18,879	22,154	26,336	27,671	27,060	38,284
19 General engineering	35,768	41,033	43,720	46,916	49,954	58,277
22 Electrical & electronic engineering	27,702	28,174	30,365	35,297	39,177	43,451
23 Mechanical, aero & prod'n engineering	32,280	33.849	37,043	42,554	45,046	53,035
26 Architecture	38,336	43,259	49,055	53,443	63,557	66,312
27 Other technologies	50,160	48,656	54,016	46,539	61,480	64,538
28 Planning	49,352	54,437	70,564	83,722	87,731	79,915
30 Law	27,703	28,597	31,178	30,561	35,017	38,683
31 Other social studies	30,982	37,709	45,619	47,272	47,384	47,804
31a Economics	19,073	17,865	17,985	15,791	18,730	19,444
32 Business & management studies	14,969	17,662	19,164	20,546	20,491	29,970
34 Language based studies	24,950	24,575	26,968	26,141	30,407	38,023
35 Humanities	36,089	38,784	45,615	48,537	44,622	56,000
36 Creative arts	80,674	77,336	88,328	120,807	106,570	139,340
37 Education	31,051	33,228	32,378	39,007	44,235	61,221

@ Unit costs of Cost Centre 01 (Clinical Medicine) exclude 24 clinical posts for patient care.

*Table 2: Relativities between Unit Costs at the University of Hong Kong 1984/85-1989/90 (HK$)**

Cost Centres	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
01 Clinical medicine@	344	404	429	477	594	716
02 Clinical dentistry	394	510	594	618	751	1,020
03 Anatomy & physiology	300	321	371	388	417	485
04 Pharmacology	394	414	620	643	686	837
08 Other studies allied to medicine	0	0	0	0	753	591
09 Biochemistry	272	299	329	312	347	366
10 Psychology	121	125	130	136	147	163
11 Other biological sciences	222	257	281	300	304	316
14 Chemistry	172	160	172	165	186	220
15 Physics	166	157	166	172	212	250
16 Other physical sciences	125	141	187	218	223	222
17 Mathematics	114	123	120	121	160	166
18 Computing	68	80	95	100	98	138
19 General engineering	129	148	158	169	180	210
22 Electrical & electronic engineering	100	102	110	127	141	157
23 Mechanical, aero & prod'n engineering	117	122	134	154	163	191
26 Architecture	138	156	177	193	229	239
27 Other technologies	181	176	195	168	222	233
28 Planning	178	197	255	302	317	288
30 Law	100	103	113	110	126	140
31 Other social studies	112	136	165	171	171	173
31a Economics	69	64	65	57	68	70
32 Business & management studies	54	64	69	74	74	108
34 Language based studies	90	89	97	94	110	137
35 Humanities	130	140	165	175	161	202
36 Creative arts	291	279	319	436	385	503
37 Education	112	120	117	141	160	221

* Unit costs of Cost Centre 30 (Law) in 1984-85 were taken as 100.

@ Unit costs of Cost Centre 01 (Clinical Medicine) exclude 24 clinical posts for patient care.

Table 3: Unit Costs in UK Universities, 1984/85-1989/90 (£'000)

Cost Centres	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
01 Clinical medicine	5.98	6.39	6.85	7.20	7.84	10.79
02 Clinical dentistry	5.85	6.34	7.00	7.47	8.06	9.05
04 Anatomy & physiology	3.45	3.58	3.83	3.89	4.00	4.11
05 Pharmacology	4.10	4.43	4.65	5.24	5.59	5.26
08 Other studies allied to medicine	2.83	3.27	3.35	3.68	3.83	4.08
09 Biochemistry	3.68	3.84	4.00	4.21	4.33	4.69
10 Psychology	2.28	2.38	2.35	2.43	2.44	2.60
11 Other biol. sciences	4.08	4.34	4.52	4.73	4.89	5.12
14 Chemistry	4.31	4.60	4.82	5.09	5.14	5.34
15 Physics	4.26	4.62	5.01	5.41	5.66	5.96
16 Other physical sciences	3.71	4.05	4.31	4.68	5.12	5.60
17 Mathematics	1.89	2.08	2.21	2.39	2.40	2.45
18 Computing	1.91	2.36	2.71	2.96	3.13	3.26
19 General engineering	3.31	3.52	3.59	3.90	4.40	4.92
22 Electrical & electronic engineering	3.09	3.30	3.41	3.63	3.90	4.44
23 Mechanical, aero & prod'n engineering	3.50	3.87	4.08	4.30	4.62	4.98
26 Architecture	2.35	2.43	2.66	3.02	3.14	3.35
27 Other technologies	3.24	3.55	3.92	3.92	3.99	4.68
28 Planning	3.19	3.38	3.25	3.35	3.54	3.95
30 Law	1.34	1.44	1.49	1.58	1.63	1.82
31 Other social studies	1.88	1.96	2.04	2.14	2.20	1.91
32 Business & management studies	1.79	1.91	2.00	2.15	2.31	3.55
34 Language based studies	1.99	2.15	2.27	2.43	2.49	2.54
35 Humanities	1.93	2.04	2.11	2.26	2.31	2.28
36 Creative arts	2.51	2.74	2.82	2.91	3.07	3.06
37 Education	2.27	2.36	2.42	2.70	2.86	3.01

Notes:

a) London, Cambridge and Oxford Universities are excluded.
b) Cost centres not represented in HKU are excluded.

Table 4: Relativities between Unit Costs in UK Universities, 1984/85-1989/90

Cost Centres	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
01 Clinical medicine	446	477	511	537	585	805
02 Clinical dentistry	437	473	522	557	601	675
04 Anatomy & physiology	257	267	286	290	299	306
05 Pharmacology	306	331	347	391	417	393
08 Other studies allied to medicine	211	244	250	275	286	304
09 Biochemistry	275	287	299	314	323	350
10 Psychology	170	178	175	181	182	194
11 Other biological sciences	304	324	337	353	365	382
14 Chemistry	322	343	360	380	384	399
15 Physics	318	345	374	404	422	445
16 Other physical sciences	277	302	322	349	382	418
17 Mathematics	141	155	165	178	179	183
18 Computing	143	176	202	221	234	243
19 General engineering	247	263	268	291	328	367
22 Electrical & electronic engineering	231	246	254	271	291	331
23 Mechanical, aero & prod' engineering	261	289	304	321	345	372
26 Architecture	175	181	199	225	234	250
27 Other technologies	242	265	293	293	298	349
28 Planning	238	252	243	250	264	295
30 Law	100	107	111	118	122	136
31 Other social studies	140	146	152	160	164	143
32 Business & management studies	134	143	149	160	172	265
34 Language based studies	149	160	169	181	186	190
35 Humanities	144	152	157	169	172	170
36 Creative arts	187	204	210	217	229	228
37 Education	169	176	181	201	213	225

Notes:

a) London, Cambridge and Oxford Universities are excluded.
b) Cost centres not represented in HKU are excluded.
c) Unit costs of Cost Centre 30 (Law) in 1984-85 were taken as 100.

Table 5: Percentage differences between unit costs of HKU and UK cost centres, after adjustment for disparities between average HK and UK unit costs across all cost centres

(Rounded to the nearest 10; for method of calculation, see notes at end)

Cost Centres	1984/85	1985/86	1986/87	1987/88	1988/89
01 Clinical medicine	+30	+40	+30	+40	+50
02 Clinical dentistry	+30	+50	+50	+50	+50
04 Anatomy & physiology	+60	+60	+70	+80	+70
05 Pharmacology	+80	+70	+130	+120	+100
08 Other studies allied to med.	-	-	-	-	+220
09 Biochemistry	+40	+40	+40	+30	+30
10 Psychology	0	0	0	0	0
11 Other biological sciences	0	+10	+10	+10	0
14 Chemistry	-30	-40	-40	-40	-40
15 Physics	-30	-40	-40	-40	-40
16 Other physical sciences	-40	-40	-20	-20	-30
17 Mathematics	+10	+10	0	-10	+10
18 Computing	-30	-40	-40	-40	-50
19 General engineering	-30	-20	-20	-20	-30
22 Electrical & electronic engineering	-40	-40	-40	-40	-40
23 Mechanical, aero & production engineering	-40	-40	-40	-40	-40
26 Architecture	+10	+20	+20	+10	+20
27 Other technologies	0	-10	-10	-20	-10
28 Planning	0	+10	+40	+60	+50
30 Law	+40	+30	+30	+20	+30
31 Other social studies	0	-10	0	-10	-10
32 Bus. & management studies	-40	-40	-40	-40	-50
34 Language based studies	-20	-30	-20	-30	-30
35 Humanities	+30	+20	+40	+40	+20
36 Creative arts	+120	+80	+150	+160	+110
37 Education	-10	-10	-20	-10	-10

Notes:

1. UK average cost is calculated after:
   - excluding costs attributable to Oxford, Cambridge and London;
   - excluding costs and student loads in respect of cost centres relating to subjects not taught at HKU (ie. Veterinary Science, Chemical Engineering, Pharmacy, Nursing, Agriculture & Forestry, Mineral Engineering, Metallurgy & Materials, and Accountancy);
   - re-distributing the remaining student load amongst the remaining cost centres in the same proportions as obtained in HKU in the year in question; and
   - assuming that the original UK expenditures per student in each cost centre are still applicable after the redistribution.
2. '+' means HKU unit cost is relatively greater than that of its UK counterpart,

while '-' means that it is less.

3. The comparisons are calculated using the following formula:

$$P\% = \frac{h - (H/U)u}{(H/U)u} \times 100$$

where P = percentage difference,
h = HKU cost centre unit costs,
H = HKU average unit costs,
u = UK cost centre costs,
U = UK average unit costs.

The overall disparity in unit costs between HKU and the UK is summarised by the ratio H/xU where x is the exchange rate which converts pounds into HK dollars. The actual HK$-cost of an individual UK centre is xu, but if this centre has a typical cost disparity, the expected unit cost in the HK environment would be H/xU times xu, or simply $(H/U)u$. Note that the actual exchange rate cancels. Thus the formula for P compares the actual HKU cost centre unit costs, h, with this expected unit cost of its UK counterpart (suitably transplanted into the Hong Kong environment). For ease of interpretation, a 'percentage change' has been used.

Examples:

HKU cost centre 26: unit costs:	HK$38,336
HKU average (university) unit cost:	HK$44,411
UK cost centre 26: unit cost:	£ 2,350
UK average (notional) unit cost:	£ 2,980

$$\text{Percentage Difference} = \frac{38{,}336 - 2{,}350 \times \frac{44{,}411}{2{,}980}}{2{,}350 \times \frac{44{,}411}{2{,}980}} \times 100 = +9.46\%$$

The formula is capable of rearrangement. Two alternative forms are:

$$P = \frac{\frac{h}{H} - \frac{u}{U}}{\frac{u}{U}} \times 100, \quad \text{or}$$

$$P = \frac{\frac{h}{u} - \frac{H}{U}}{\frac{H}{u}} \times 100$$

Allowance had to be made first for the fact that the average in the UK is different from the average in HKU because of the different 'subject mix' (i.e. the effects of the inclusion in the UK figures of the costs of expensive subjects not taught at HKU, such as Chemical Engineering), and this was done as indicated in Note 1 to Table 5. Subject to this, however, the effect of the 'Cowan formula' is to neutralise the effects of the pound/dollar exchange rate and make meaningful comparisons possible. Some brief comment is offered below on some of the comparisons produced.

COMPARISONS

It was noted above that professional salaries in Hong Kong are significantly above those in the UK. This is certainly true of academic and related staff in universities in Hong Kong. The normal expectation would therefore be that, other things being equal, the costs of *all* subjects at HKU would be higher than those in the UK. However, the figures in Table 5 do not throw any light on this question. All they show is the differences in *relativities* between unit costs in HKU compared to those in the UK. With this caution in mind, it is instructive to look at particular groupings.

Clinical Subjects

Making comparisons of costs in clinical subjects is particularly difficult. Such difficulties arise even within the same country, or to some extent the same city (e.g. London). Comparisons across national boundaries are even more problematic.

The chief difficulty arises from the nature of clinical teaching. Essentially, teaching students how to treat patients can only be done by showing them, i.e. by doing it. It is not possible, therefore, reliably to separate the costs of treating the patient from the costs of teaching the student.

In a sense, the problem is the same all over the world; it is the solutions which are different. In the UK, patient care on the one hand, and clinical teaching and research on the other, are in principle funded separately, the former through the National Health Service (NHS), and the latter through the Higher Education Funding Councils (HEFCs). The two meet in teaching hospitals, where clinical academic staff, paid from HEFC funds, hold honorary (i.e. unpaid)

NHS appointments, and hospital staff paid from NHS funds may hold honorary academic appointments in recognition of their contributions to teaching. However, some staff hold part-time, paid appointments from *both* the hospital and the university, called A+B appointments, which together make up a full-time load.

The theory is that the element of cross-subsidy involved between the NHS and the HEFC probably cancels itself out (a theory which goes by the elevated title of 'knock for knock'), and that it is therefore not worth setting up the detailed accounting systems which would be required if a strict system of charging for services mutually rendered were to be introduced It remains to be seen whether this position will remain defensible in the new system of independent hospitals, contracted out of the NHS and selling their services to patients and their doctors.

In Hong Kong, the theory of separate accounting for patient care and for teaching and research is barely attempted. The medical staffing needs of the major HKU teaching hospital (Queen Mary Hospital) were determined primarily by the medical needs of the population of Hong Kong Island, as is appropriate. However, these were then translated into a staff establishment for the Faculty of Medicine at HKU, which *should* have been determined primarily by the size of the Faculty's student population. This produces a situation in which clinical academic staff of the University spend on average only 35 per cent of their time on teaching and research, and the rest on patient care. At the extreme, the figure for teaching and research in some departments may be nearer 5 than 35 per cent.

The footnotes to Tables 1 and 2 indicate an attempt to make the figures for Clinical Medicine more nearly comparable to those for the UK by excluding from the calculations the costs of a number of posts which were provided exclusively for patient care. Even so, however, the difference in the bases for financing patient care, teaching and research as between Hong Kong and the UK make it very difficult to draw the sorts of conclusions about comparative levels of resource provision which could in principle be helpful to all concerned.

This points to the need for different arrangements for financing medical teaching and research in Hong Kong. It is to be hoped that the newly established Hospital Authority will pursue the matter, so that *it* can make defensible judgements about the financing of patient care, and the University can make similar judgements about the resourcing needs of clinical teaching and research.

Pre-Clinical Subjects

The size of the 'premium' over the average enjoyed by Anatomy & Physiology, Pharmacology and Biochemistry, as shown in Table 5, is such as to give rise to questions of policy and pedagogy such as:

- Do the methods of teaching the subjects in HKU reflect changes which have taken place in the UK (and in North America) and which have resulted in teaching which is more economical?
- Should the place of these subjects in the curriculum be re-examined, with a view to reducing the time and therefore the costs associated with them?
- In respect of Biochemistry in particular, what is the case for its premium over not only UK comparators but also Cost Centre 11 (Other Biological Sciences)? If the answer is related to its organisational and geographical location in the Faculty of Medicine, should the case for this location be re-examined?

These questions remain a focus of ongoing debate.

Physical Sciences, Engineering and Other Subjects

Table 5 suggests that, compared with the Life Sciences (Cost Centres 1 to 11, with the exception of 10 - Psychology), the Physical Sciences are disadvantaged. This raises questions such as whether the nature of the disciplines contained within Life Sciences at HKU and those within the Physical Sciences at HKU are so different from the nature of those disciplines in the average UK university that the disparity of treatment revealed in Table 5 can be explained.

Similar considerations arise with respect to Engineering. In addition, reference may be made to Tables 1 and 2, which do not depend on UK comparisons, to ask whether it could have been right that Electrical and Electronic Engineering (Cost Centre 22) was financed at the same rate as Law (Cost Centre 30) in 1984-85, and that Computing (Cost Centre 18) was financed at an even lower level, corresponding with that for Economics and Business & Management Studies (Cost Centres 31a and 32).

CONCLUSION

Unit costs are a very imperfect tool and, to the academic used to numerical and other methods of analysis which can stand up to rigorous intellectual scrutiny, they appear irremediably unsatisfactory. Unfortunately most management information is like that: it is incomplete, approximate and imperfect. It is nevertheless frequently all there is at the time, and the decisions which it is intended to inform will not go away. *Some* means must be found to distinguish between the urgent, and always articulate, claims from academic departments for a larger share of finite resources.

The traditional method, of considering each case on its merits and doling out resources in penny packets -- a lectureship here, an extra secretary there -- has a spurious attraction precisely because it 'considers each case on its merits'. Over time, however, this method produces a pattern of resource distribution which is indefensible, notwithstanding the fact that the process which has produced it appears to be fairness itself.

The annual volume of University Management Statistics and Performance Indicators in the UK, referred to above, routinely carries a 'health warning':

> Wise and careful use of these indicators, as an adjunct to judgement, may shed some useful light on certain aspects of performance; without such wisdom, uncritical use of these statistics may seriously damage the health of universities.

As with so much else in management, whether of universities or of other things, it is frequently more important to know the right questions than the right answers. The great value of unit costs is that they can and should lead to the asking of the right questions. They will more often represent a departure point for further enquiry than a basis on which firm and instant conclusions can be drawn.

NOTES

1. For example, the UPGC indicated to the University of Hong Kong (HKU) in 1992 that, as from the next triennium (1995-98), it would no longer necessarily be financed on the basis of a higher cost per student than the other tertiary institutions in the territory, as,

according to the UPGC, had always been the case hitherto. The case for the advantage enjoyed by HKU had been that it had a research mission which the other institutions did not. However, the Chinese University of Hong Kong had become increasingly active in research, and the University of Science and Technology had made impressive claims about the research it was *going* to do. As a result, the UPGC stated that HKU would receive funding at a higher rate per student (if at all) only if it could demonstrate that the money provided in the block grant for the support of research was being spent on research, to good effect, to an extent which would justify differential treatment.

2. This requirement, like so much in the management of Hong Kong's higher education institutions, was inherited from the UK, where it represented a crude device by the Treasury to control costs in universities (and to ensure that university staff were not, by and large, paid better than civil servants: a task in which the UK has been notably successful). It specifies that, of the totality of academic staff in the institution, not more than x% (x being usually set at 40) shall be 'senior' (i.e. in the grades of professor, reader or senior lecturer).
3. *University Management Statistics and Performance Indicators in the UK* (published annually by the Committee of Vice Chancellors and Principals (CVCP) of Universities of the UK and available from the Universities' Statistical Record, P.O. Box 130, Cheltenham, Gloucestershire, GL50 3SE, UK).
4. *Statement of Recommended Practice: Accounting in UK Universities* (1989) (Committee of Vice Chancellors and Principals, 29 Tavistock Square, London WC1 9EZ, UK).
5. Some people feel that students of different kinds should be weighted, e.g. to count an undergraduate as a single unit, a postgraduate as two units, etc.. However, the rest of what is set out here is unaffected by this consideration.
6. A cost centre is a group of academic departments, each of which represents a subject of which the costs are broadly similar to those of the other departments in that cost centre. The aggregation in a cost centre makes comparisons between institutions more reliable than comparisons based on individual departments.

7. These three universities are excluded from the UK figures in these tables since the figures relating to their costs are in different ways misleading. The figures for Oxford and Cambridge which are published by the CVCP *exclude* the contribution made to the costs of teaching by expenditure by the universities' colleges. Those for London *include* the costs of the 'London allowance' paid as a supplement to their salaries to all employees of the University of London. In fact, however, the picture represented by the figures when Oxford, Cambridge and London are included shows very little difference, suggesting that the effect of these special factors is marginal.

Can 'Small Government' Survive?

An International Perspective on Hong Kong's Education Finance

Cheng Kai Ming

Examination of the state of educational finance in Hong Kong inevitably requires analysis from an international perspective. Similar analysis has been made in an earlier paper (Cheng 1992) which relied mainly on 1988 data. The situation has changed significantly since then, especially because the drawing near of 1997 has prompted the government to make certain policy changes that have financial implications. Also, the general development of the education system has caused some new demands in educational finance. Both factors have led to a major change in the state of educational finance.

This paper analyses the factors leading to this change, and presents possible scenarios for the future. It particularly focuses on the notion of 'small government', which refers to a policy of limiting the size and role of government in economic and social affairs.

THE SMALL GOVERNMENT APPROACH

Two frequently-used indicators to compare educational finance internationally are (a) public educational expenditure as a percentage of Gross National Product, GNP [or Gross Domestic Product, GDP, which is the indicator used in Hong Kong] and (b) public educational expenditure as percentage of total public expenditure. The former indicates the attention paid to education relative to the wealth of the country; and the latter indicates the relative attention the government pays to education in terms of finance. The former is often used to compare across governments, while the latter is used to compare across sectors within a government budget.

During the last two decades Hong Kong's public educational

expenditure as percentage of total public expenditure has always been above 14 per cent, and have usually been the largest sector in the government budget. However, Hong Kong's public educational expenditure as percentage of its GDP has usually been below 3 per cent. Table 1 shows the figures since the introduction of nine-year compulsory education in 1978, a landmark in the development of Hong Kong's education system.[1]

Table 1: Public Education Expenditure in Hong Kong

	Total Public Expenditure as % of GDP	Public Education Expenditure as % of Budget	Public Education Expenditure as % of GDP
1978-79	14.9	18.7	2.8
1979-80	14.6	17.6	2.6
1980-81	16.1	15.3	2.5
1981-82	17.8	14.2	2.5
1982-83	19.1	14.3	2.7
1983-84	18.6	14.9	2.8
1984-85	16.4	16.7	2.9
1985-86	16.5	16.7	2.7
1986-87	16.7	17.5	2.9
1987-88	10.3	17.1	2.7
1988-89	11.0	17.5	1.9
1989-90	11.6	15.9	1.8
1990-91	18.3	16.9	3.0
1991-92	17.8	17.4	3.1
1992-93	17.1	17.3	3.0

Source: Hong Kong government annual report, various years.

The percentage of GDP allocated to education in Hong Kong is fairly low by international standards. Table 2 charts Hong Kong's position on the international map. The three per cent of GDP spent on education in Hong Kong is much less than the average of any subregion in the world.[2]

Two points need to be mentioned to qualify the low level of the Hong Kong figures. First, the percentage is a relative value. Hong Kong's GDP has enjoyed amazing growth over the years, and the absolute increase in educational expenditure is equally impressive.

Table 2: International Summary of Public Expenditure in Education as Percentage of GNP

	1980	1985	1990
Africa	5.3	5.8	6.1
Asia	4.5	4.3	4.1
Europe	5.5	5.5	5.3
North America	5.2	5.1	5.5
Oceania	5.6	5.6	5.4
Latin America/Caribbean	4.1	4.1	4.0
Developing countries	3.9	4.0	3.9
Developed countries	5.4	5.3	5.2
World total	5.1	5.0	5.0

Source: UNESCO (1992), p.2-24.

However, comparison of the Hong Kong figure with those of countries with comparable economic strength still suggests that resources allocated to education in Hong Kong are small.

Second, the international figures over the last decade have been fairly stable, quite in contrast to the situations in the 1960s and early 1970s during which there was spectacular expansion in education budgets. It is also different from the trend that started in the mid-1970s which saw drastic drops in educational expenditure in quite a number of countries, particularly in the developed world. Hence, if stability has been a trend since the mid-1980s, then Hong Kong is in keeping with this trend, despite its low figures. This is perhaps characteristic of Hong Kong's education policies, which seldom fluctuate according to fashionable tendencies elsewhere.

Nevertheless, the funding for education in Hong Kong is conspicuously low. This is a feature of government expenditure in general. As noted in Table 1, during the period 1978-92 total public expenditure was always below 20 per cent of GDP. Indeed, it has been a 'doctrine' of the Hong Kong Government to limit public expenditure to 15 per cent of GDP, although actual expenditure has tended to exceed this level. Even 20 per cent is a low figure by international standards. A recent survey reveals that most industrial countries exceeded the 15 per cent level in the 1960s or even in the 1950s. In 1986, the modal value of total public expenditure was 40 per cent of GNP in industrialised countries, 27 per cent in middle-

income countries, and 23 per cent in low-income countries (Lindauer & Velenchik 1992). The low public expenditure in Hong Kong reflects the notion of small government, which supports a low taxation policy on the one hand and demands efficiency in public services on the other. Despite this philosophy, however, Hong Kong has a fairly sophisticated education system with comparatively low levels of funding.

WHY LOW-LEVEL FUNDING WORKS

Hong Kong's three percent of GDP supports a fairly comprehensive education system, which is comparable with almost any other system in the developed world. There is universal attendance from 6 to 15, and truancy or dropout is minimal by international standards. Over 90 per cent of those who complete compulsory education continue their studies in general education, and an additional 5 per cent join technical and vocational courses. Over 30 per cent of the secondary school graduates enter pre-university courses, and over 60 per cent of these are admitted to higher education. All those who would like and who have the ability to pursue higher education can do so. The entire system from primary one to university graduation is basically financed by the government. Only pre-primary and adult education are self-financing.

Turning to the distribution of resources between different levels of education, Table 3 compares Hong Kong with countries in East

Table 3: Distribution of Current Education Expenditure by Levels (1980), Selected Asian Countries

	Pre-primary & Primary	Secondary	Tertiary
Hong Kong	33.7	35.7	24.6
Japan	39.6	34.6	11.1
Mainland China	27.6	34.3	20.0
Singapore	35.8	41.1	17.1
South Korea	49.9	33.2	8.7
Taiwan	30.0	33.5	11.1

Sources: UNESCO (1991), Table 11; Republic of China (1982), p.43.

Asia that operate education systems with similar structures. For reasons which will be explained below, it presents 1980 figures.

Hong Kong's pattern is different from that of the other countries shown, particularly in the high percentage consumed by tertiary education. The proportion was near to that in mainland China, but in 1980 China had not yet launched compulsory basic education and hence the enrolment in basic education was relatively small. In Hong Kong, by contrast, nine-year compulsory education was introduced in 1978, and attendance was already near 100 per cent in 1980. More important is that in 1980, the enrolment in higher education was only 2.1 per cent of the relevant age group. In other words, Hong Kong spent a large portion of its resources on the privileged few who attended higher education. Average per student expenditure in the major higher education institutions in Hong Kong is shown in Table 4.[3]

Table 4: Per Student Expenditure on Higher Education, Hong Kong (HK$)

	1988-89	1989-90	1990-91
University of Hong Kong	121,971	131,412	144,274
Chinese University of Hong Kong	89,560	95,955	104,319
Hong Kong Polytechnic	52,356	64,420	67,958
City Polytechnic of Hong Kong	66,474	84,809	83,880
Baptist College	57,669	70,170	76,111

Note: These are 'unit costs' which in fact refer to direct costs only. They should more accurately be called per student expenditures. These are the only data available in the public domain. Data are also available as 'recurrent expenditures' which are not used here because they do not present the whole picture. The data here do not include the other two institutions supported by the government, i.e. the University of Science & Technology and Lingnan College, which were newcomers to the scene.

Source: Legislative Council papers, 1992.

The figures in Table 4 are in Hong Kong dollars. In US dollar terms, they are in the range of $10,000 to $20,000. This is very high by international standards. The average among developed countries in 1988 was US$6,520.[4] It should be borne in mind that by the end of the decade the enrolment rate had been raised from 2.1 per cent

in 1980 to around 10.0 per cent. Although data are not available on distribution of funding in the late 1980s, it can be safely said that the percentage allocated to higher education considerably increased during the 1980s because the student population at the other levels was declining.[5]

Therefore, the substantial unit cost for higher education does not help explain the overall low level of funding. However, it does invite examination of funding at other levels of the education system. Table 5 shows per student expenditure at secondary and primary levels. The years have been chosen so that the data are comparable with those in Table 4. The disparity between higher education and basic education is significant. The low level of funding for primary schools is particularly noticeable. The per student expenditure in aided secondary schools, which form the majority,[6] was only in the order of one-tenth of that for universities. The per student expenditure for primary schools was even lower, around one-fifteenth of that for universities.

Table 5: Per Student Expenditure at Secondary and Primary Levels (HK$)

	1998-89	1989-90	1990-91
Government Secondary	14,553	17,179	19,654
Aided Secondary	8,717	10,383	12,396
Government Primary	7,960	9,298	10,902
Aided Primary	5,805	6,843	8,034

Source: Legislative Council papers, 1992.

International comparison may again be helpful at this point. The indicator employed to compare efforts paid to different levels of education is the unit cost (by which is again meant per student expenditure) expressed as percentage of the country's per capita GNP (or GDP). This leads to the figures in Table 6.

As noted by Coombs (1985, p.158), in developed countries resources tend to be more evenly distributed among students at all levels. Although higher education students usually receive more than primary or secondary school children, the gap is relatively small. In developing countries, the gap is typically huge. Often, the unit costs for higher education students exceed per capita GNP, sometimes by

Table 6: Unit Costs as a Percentage of Per Capita GNP/GDP, 1988

	Pre-primary & Primary	Secondary	Tertiary
Sub-Saharan Africa	17	61	540
Latin America/Caribbean	9	13	50
South Asia	12	21	80
Least developed countries	12	43	210
Developed countries			50
United States of America	18	27	53
United Kingdom	15	27	49
Germany, Federal Republic	11	18	31
France	12	21	24
Japan	14	17	51
Singapore	8	14	55
South Korea	13	8	5
Mainland China	5	14	221
Hong Kong*	8	11	163

* see endnote [7].

Source: UNESCO (1991), p.98. Data for Taiwan not available.

a substantial amount, whereas primary school children receive only a small fraction of the per capita GNP, and secondary school children receive little more.

Obviously, Hong Kong is in the developing country pattern, providing very expensive higher education but cheap basic education. This has been the strategy for running the comprehensive system with low level funding. Until recently, higher education was offered only for a few, and hence could be expensive. Basic education was provided for the mass, but was cheap. At both ends, the sum was comparatively small, hence in keeping with the small government doctrine. The question then arising is how this general pattern of expensive higher education and cheap basic education will evolve *vis à vis* further developments of the education system.

IMPACT OF HIGHER EDUCATION EXPANSION

The expensive provision of higher education is facing challenge with the dramatic expansion in the sub-sector. In the mid-1980s, the government planned gradually to expand higher education so that by 2000 14.5 per cent of the relevant age group would be studying in local degree-awarding courses. In 1988 and 1989, the Governor in two consecutive moves raised the target to an enrolment rate of 18 per cent in 1994. This was aside from another 7 per cent in non-degree studies.

If those who can enjoy government-subsidised, degree-awarding studies are now 18 per cent rather than 2.1 per cent, the question is whether Hong Kong is still prepared to devote the same expensive sum to each of these students. The expansion over a period of 14 years is almost 600 per cent. If Hong Kong could optimistically maintain an annual economic growth rate of 10 per cent during this 14 years, the overall growth would be around 380 per cent. Maintaining the same unit costs for higher education students would mean a much larger budget share for higher education.

In international terms it is rare indeed for dramatic expansion of higher education not to lead to expansion of the education budget. Table 7 presents figures on some of East Asian countries which have similarly expanded higher education, have enjoyed similar economic growth, and have a similar cultural heritage. With the exception of Japan, which followed the trend of the developed world and decreased its educational expenditure, all the countries had significant growth in expenditure. Singapore, South Korea and Taiwan followed a similar pattern of spectacular expansion during the early 1980s (see Cheng 1992, p.265). However, after the late 1980s, Singapore and South Korea came down to a more modest level, though Taiwan continued its expansion.

The spectacular increases in expenditure in Singapore, South Korea and Taiwan in the 1980s was largely due to expansion of higher education. Singapore, for example, increased its tertiary enrolment by over 50 per cent in the first three years of the 1980s (UNESCO 1992, Table 3.21), permitting 15 per cent of the age group to enrol in higher education. South Korea increased its tertiary enrolment by 125 per cent in the first five years of the 1980s. The enrolment rate reached 38 per cent in 1985, and graduate unemployment emerged (Kim 1990). Enrolments in both countries stabilised in the later 1980s, a fact which was reflected in the educational expenditure. Taiwan increased its higher education enrolment by

Table 7: Public Expenditure on Education as a Percentage of GNP, Selected Asian Countries

	1980	1985	1990
Mainland China	2.5	2.6	3.1
Taiwan	3.7	4.2	5.5
Japan	5.8	5.0	4.7*
Hong Kong	2.5	2.7**	3.0**
Singapore	2.8	4.4	3.4*
South Korea	3.7	4.5	3.7

* 1988
** See Table 1.

Sources: UNESCO (1992) Table 4.1; State Education Commission & Shanghai Institute for Human Resources Development (1991b), p.8; Republic of China (1992), p.43.

almost 60 per cent during the decade (Republic of China 1992, p.21), but the steady growth in enrolment perhaps explains the continuous growth in expenditure.

However, increase in the government budget is not the only way to cope with higher education expansion. Tuition fees in Hong Kong are being raised to 18 per cent of the 'unit cost'. This is a change from the policy target of 12 per cent which was laid down in 1973. It has brought an increase from below HK$6,000 (around 6 per cent of the unit cost) to HK$36,000 in less than 10 years. Although the rise in fees has been accompanied by increased access to loans and grants, the effects of the rise remain to be seen. The dramatic expansion in higher education may substantially change the labour structure, which would in turn change the rate of return to a university graduate. All these will add to the complexity of cost recovery and there are limits within which one can draw from students' future income. All in all, an increase in the budget for higher education is inevitable.

QUALITY IMPROVEMENT IN BASIC EDUCATION

The expansion of higher education is one factor that might challenge the notion of small government. The call for quality improvement in basic education is another.

As mentioned earlier, provision of basic education is generally on the cheap. The survival of basic education, and primary education in particular, under low level funding relies very much on the low requirements on teacher qualifications, and hence low salaries. The staffing policy in government and aided schools[8] is that only 70 per cent of secondary school teachers are university graduates with a degree, the other 30 per cent being non-graduate teachers trained in post-secondary colleges of education. All primary school teachers in these sectors are expected to be non-graduates. Only 62.2 per cent of secondary teachers in 1992 were degree-holders (Education Department 1993, p.25). There are also a few degree-holders in primary schools (3.2 per cent in 1992: *ibid.*, p.23) but they are not recognised as graduates in terms of salaries.

In a society of great earning differentials, qualifications make a significant difference. The median salary of a non-graduate teacher is about only half that of a graduate teacher. As in any other system, salaries constitute the largest part of recurrent expenditure, which in turn constitute the greatest share of education expenditure. In 1990-91, 93.9 per cent of expenditure at schools level went to recurrent expenditure, which is basically teachers' salaries (Education Department 1991).

Improvements of teachers' qualifications will be costly in terms of government expenditure, but such improvements have become inevitable. As elsewhere, when expansion in scale has come to its limits at primary and secondary levels, the community's attention has moved to quality of schooling. One key issue is the improvement of teachers, and teachers' qualifications have become a major focus of attention. The pressure to raise qualifications also comes from the wider spread of higher education and the lack of applicants for non-degree teacher training.

The government has recently adopted recommendations from the Education Commission (1992) to introduce a number of strategic measures all related to teachers. One of the most significant recommendations aims to fill 35 per cent of the primary teaching posts with degree-holders by 2007. Other recommendations include the improvement of class-size and teacher:pupil ratios, the introduction of incentives for in-service professional development, and the upgrading of support facilities. The whole package has been costed at HK$23.5 billion at March 1992 prices, which includes an additional investment of HK$2.2 billion per year in the recurrent budget (Education Commission 1992, pp.9-10). The total yearly recurrent expenditure on education at the time that the recommendations were

made was 16 billion (Budget Speech 1993, p.20). For school education, on which the recommendations focus, yearly expenditure in 1992 was less than 12 billion (Hong Kong 1993, p.21). The proposed addition of HK$2.2 billion a year is thus a very substantial increase.

However, the recommendations are still modest in their goals. The 15-year plan, if accomplished, will still leave about one third of the secondary teaching force and two thirds of the primary teaching force as non-graduates. This is rather conservative when compared with Taiwan and South Korea, both of which are moving towards a full-graduate teaching force at both secondary and primary levels. Even in mainland China, which has suffered from low teacher qualifications, there are measures in the major municipalities to move towards a full-graduate teaching force. The Education Commission calls for an interim review in five years' time, and it is envisaged that the improvements achieved in the five years will provoke aspirations for further improvements. The education budget must expand further if such aspirations are to be met.

THE END OF SMALL GOVERNMENT?

It is clear that the general pattern of educational expenditure that tolerates low level funding may come to an end. Higher education, which has been enjoying high unit costs, has undergone an irreversible expansion and is no longer for the elite. Any substantial lowering of the unit cost in higher education is not only technically difficult and academically objectionable, but also politically unwise. Hence, expenditure on higher education will see a dramatic increase. At another level, the low unit cost which has maintained the massive basic education system is felt to be detrimental to quality of schooling and is no longer seen as tolerable. Improvement of quality again entails dramatic increase in education expenditure.

Higher education and basic education consumes the major part of the education budget.[9] Hence, massive expansion of higher education and significant improvement in basic education will lead to educational expenditure which is comparable in size to that of similar systems. It is doubtful whether the three percent limit is defensible.

There are nevertheless optimistic scenarios. One is that the Hong Kong economy grows so rapidly that the additional investments in education could be easily absorbed in the additional surplus in the coming years. This is of course a rather bold speculation. Although

there is general consensus about the future growth in Hong Kong's economy, to what extent the growth in the economy will match the ever escalating thirst for more and better education is uncertain.

Another scenario may be realised if there is an overhaul in the financing mechanism, so that while investments in education grow, the additional burden may be shared by partners outside the government. If this is to materialise, plans must be made. One way, which has already been embarked on, is to increase fees. This concept could be extended to contribute to capital as well as recurrent expenditure. Also, donors in the community might like to sponsor awards or research. However, the major part of recurrent expenditure is likely to remain a government responsibility. Many of the returns from education are enjoyed by the entire society, and it is questionable how much employers or learners should pay for what would reward the broader community.

There could be other scenarios, but there does not seem to be an easy solution to reduce the necessity for increasingly the education budget. If the education budget is to go beyond the three percent limit, one may sensibly ask whether the 'small government' notion is still viable. If the answer to this question is negative, the implications are tremendous. The government as a whole may well spend beyond the 20 per cent limit. What are then the taxation implications? If that kind of issue is on the agenda, then Hong Kong is likely to move into a mode of operation which is very different from what it has been.

NOTES

1. Figures in this table are slightly different from those in Table 1 of Cheng (1992) which refers to the same indicators. The concern here is the actual expenditures, whereas in Cheng (1992) the concern was policy intentions and thus budget estimates.

2. The figures in Table 1 are actual expenditures, which in recent years have often been higher than the budget estimates because the actual GDP has often exceeded the estimate. However, the difference between actual expenditures and budget estimates is not great.

3. Since 1991, Hong Kong has seen the first directly elected elements in the legislature and this has created access to some

data which were not in the public domain. Data here are an example.

4. Comparing dollar to dollar of course is nor always fair. Readers may like to refer to a recent OECD calculation (1992) which carries more economic rigour.

5. The number of primary pupils dropped from 544,700 in 1980 to 524,919 in 1990. Secondary ones dropped from 455,600 in 1980 to 433,208 in 1990 (Education Department 1980, 1990).

6. In 1992, 323 out of 455 secondary schools were aided schools.

7. This is based on the Hong Kong GDP figure for 1988, which was HK$425,630 million (Budget Speech 1989, p.12). The per capita GDP was therefore around HK$76,000. This does not entirely tally with the World Bank figure which is an estimation made by the bank. The 'pre-primary & primary' category is replaced here by 'primary'. The subsidy to pre-primary education is minimal. The actual figure would be smaller if pre-primary education is also counted. The tertiary figure is calculated on a unit-cost of HK$124,000, which is mid-way between figures for the University of Hong Kong and the Chinese University of Hong Kong. This is justifiable because these were the two major degree offering institutions in 1988.

8. Government and aided schools together taught 90.3 per cent of primary students and 87.0 per cent of secondary students (Education Department 1992, p.6).

9. The remaining portion of the education budget is mainly consumed by technical and vocational education which operates under the auspices of the Vocational Training Council (VTC). Easy access to higher education has made technical and vocational education less attractive. The economic shift towards the tertiary sector has also increased demand for graduates from general education. Overall, the significance of technical and vocational education in the education budget is likely to decline in the near future.

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