



Pacific Economic Cooperation Council

Pacific Economic Outlook: Structure 2007 – Aging and Economic
Growth Potentials in the Pacific Region
Background Papers

HONG KONG, CHINA*

KA CHUN HOU

ABSTRACT

This paper analyses the macroeconomic implications of population aging in Hong Kong, China, particularly on its economic growth potential and fiscal sustainability over the long term. While a series of remedial measures have already been implemented by the HKSAR Government in recent years, including the Mandatory Provident Fund (MPF) System, importation of professionals and talents schemes, and tightening up of eligibility criteria for social security payments, etc., more new policy initiatives and reform measures are still considered necessary, especially in the spheres of social welfare and health care services, for coping with the challenges and opportunities in the years ahead.

1. INTRODUCTION

The latest official projections indicate that the trend of population aging in Hong Kong, China, which has become increasingly apparent in recent years, will accentuate visibly in the next two decades or so. Specifically, the projections point to: (i) a doubling in the proportion of elderly population (aged 65 or above) by the late 2020s, along with (ii) a sustained slowdown in the population growth over the next two to three decades; (iii) a dwindling share of the population of working age as from 2012 onwards; and (iv) a contraction of the labour force in about 10 years' time. If not properly tackled, these developments are likely to undermine Hong Kong, China's long term economic growth potential. Its fiscal sustainability will also be seriously called into doubt, due to increased public spending on medical and health, long term care services and social security payments on the one hand, and reduced tax revenues from both the business community and the workforce on the other.

In recent years, a series of measures have already been put in place by the HKSAR Government which may go some way towards addressing the concerns of population aging. These included, inter alia, the set up of Mandatory Provident Fund (MPF) System and reform of the civil service pension system in 2000, the population policy revamp in 2003, and the launch of the Quality Migrant Admission Scheme (QMAS) in mid 2006. Yet more new policy initiatives and reform measures are still considered necessary in order to effectively cope with the challenges and opportunities lying ahead.

This paper begins with a summary account of the recent demographic trends in Hong Kong, China and official projections for the period up to 2033, followed by an analysis of the resultant implications for the economy. A review is then undertaken of the various policies and measures implemented so far by the HKSAR Government in relation to the elderly population, having regard to Hong Kong, China's own circumstances as well as experiences in some major overseas countries.

* All figures and statistical analyses in this paper are based on data and information available up to January 2007. The views expressed in this paper reflected those of the author and should not be taken as the official views of the Government of the Hong Kong Special Administrative Region.

2. RECENT DEMOGRAPHIC CHANGES IN HONG KONG, CHINA

2.1 Major trends since the early 1970s

The salient demographic trends in Hong Kong, China over the past two to three decades can be summarized as follows:

Sharp drop in fertility rate

Whereas the total population in Hong Kong, China has been distinctly on the increase from 4.0 million in mid-1971 to 7.0 million in mid-2006, the crude birth rate i.e. the number of known live births per 1 000 population has decreased almost continuously from 19.7 to 8.2. Consequently, the overall fertility rate¹ has dropped sharply from 3.46 to 0.97 (Table 1). The latter figure is way below the replacement ratio of around 2.1². It is also among the lowest in the world.

Increase in life expectancy

Life expectancy in Hong Kong, China has increased steadily over the years, along with a persistent decline in the mortality rate and progressive improvements in the provision of medical and health care services. For male, the life expectancy at birth has gone up by 11 years, from 67.8 in 1971 to 78.8 in 2005. As for female, there has been likewise a notable increase, by 9.2 years from 75.3 to 84.5 (Table 2).

Maturing Population

The corollary of reduced fertility and improved life expectancy is a continuous reduction in the proportion of younger people aged below 15 in the total population from 35.9 percent in mid-1971 to 13.8 percent in mid-2006, as well as a surge in the proportion of elderly population aged 65 or above from 4.5 percent to 12.3 percent. Meanwhile, the median age of the population has jumped from 21.7 to 39.7 (Table 3). A comparison of the population pyramids in mid-1971 and in mid-2006 clearly reveals such changes (Figures 1 and 2).

Moderation in population growth

The pace of population expansion has moderated over the years, from an annual average of 2.5 percent in the 1970s to 0.8 percent during 2001-2006. This was attributable mostly to a decline in the relative importance of natural increase vis à vis net migration as a contributor to the population growth. Specifically, natural increase contributed about half of the population expansion in the 1970s, but only about a quarter during 2001-2006.

2.2 Projected trends up to 2033

Presented below are the major demographic trends as projected by the HKSAR Government for the next two to three decades:

- *Sustained low fertility level:* The total fertility rate is projected to stay below 1.0 throughout the entire period up to 2033, still among the lowest in the world (Figures 3 and 4)
- *Further increase in life expectancy:* The downtrend in the mortality rate is

¹ Total fertility rate is the average number of children that a woman would bear if she were subject throughout her reproductive span to the fertility rates prevailing in the reference year.

² Replacement rate refers to the number of children a woman needs to produce for a population to replace herself. Each woman would produce an average of one daughter, who may be said to “replace” her mother in the population. A total fertility rate of 2.1 is considered to correspond to the replacement level under conditions of low mortality, allowing for such factors as sex differential at birth and infant and childhood mortality.

projected to extend into the next two decades or so, amid growing affluence of the economy, further advancement of the medical care technology and services, and increasing health consciousness generally. According to the official projections, the life expectancy at birth will increase to 82.5 years for male and 88.0 years for female in 2033. These figures compare favourably with those in the advanced economies such as the US and the UK (Figures 5 and 6).

- *Further slowdown in population growth:* Given the sustained low fertility rate and steady net migration flows, and granting no major shift in the future immigration policy, Hong Kong, China's population is projected to grow steadily by around 0.7-0.9 percent per annum in the next 10-15 years, and then at a slower pace of around 0.4 percent in the period up to 2033. To a large extent, this moderating trend reflects the dampening impact of the lower rate of natural increase which is expected to turn negative as from 2016 onwards (Table 4, Figure 7).
- *Surge in the elderly dependency ratio³ after mid-2010s:* Consistent with the accelerated aging trend in about 10 years' time, the proportion of the elderly aged 65 or above is projected to move up from 12 percent in 2003 to 13 percent in 2013, and markedly further to 19 percent in 2023 and 27 percent in 2033. By the early 2030s, about one in four people (compared to one in eight at present) will fall into the age group of 65 or above, whilst the median age of the population will rise to 49 by 2033. Coupled with the reduced population of working age, this will result in a sharp jump in the elderly dependency ratio from 161 in 2003 to 428 in 2033 (Table 5, Figure 8).
- *Contraction in labour supply from 2015:* Consequential to the above changes, the overall labour force participation rate (LFPR) is expected to drop from 61.3 percent in 2004 to 52.2 percent in 2023. This will henceforth lead to a reduction in the labour force in both absolute and proportionate terms (Figures 9 and 10).

A note of caution here. Foreign domestic helpers (FDHs) are included in all the projected figures above. Currently, there are more than 230,000 FDHs in Hong Kong, China. This number is projected to increase to around 350,000 in 2033. Most of the FDHs comprise younger females. The presence of this particular group of people is bound to cause some distortion to the underlying demographic trend in Hong Kong, China. Excluding FDHs, the proportion of the elderly aged 65 or above in Hong Kong, China would become higher by around one percentage point, at 28 percent in 2033. The median age of the population would also be boosted to 50, as would the elderly dependency ratio to 458 (Table 5).

3. MACROECONOMIC IMPLICATIONS OF THE AGING POPULATION

A review of the relevant literature and studies suggests that the savings rate of an economy may decline with aging of the population. This proposition is based upon the assumption that individuals will adjust consumption and savings behaviour over time, in accordance with their anticipated path of life-cycle income. General speaking, employment earnings as a primary source of income can be expected to rise during the early stage of one's career life, peak in the prime age, and then decline particularly during the post retirement period. In line with such an

³ Elderly dependency ratio is defined as the number of persons aged 65 or above per 1,000 persons of working age.

income profile, the savings rate is usually higher during the prime working years (say 30-50), but becomes lower or even turns negative (i.e. “dis-save”) after retirement. This can be portrayed by a hump shaped savings curve over one’s life cycle. With the population getting older, an increasing down drag is thus envisaged for the overall savings rate and lesser investment capital will be available for fuelling future economic growth.

An additional factor dampening future investment is the lower return or yield on assets owned by the dwindling, aging workforce. Taking these factors together, the current account balance is expected to shrink, on the presumption that savings will decrease by a larger magnitude than investment (IMF, 2004).

The contracted labour force coupled with lower level of investment will be detrimental to overall economic growth in the long run, if this is not offset by a sustained and appreciable gain in productivity. A slowdown in per capita GDP and a worsening in the living standards will ensue. In a recent study, the IMF reckons that the ongoing trend of population aging, if left unchecked, could slash the per capita real GDP growth in the advanced economies by 0.5 of a percentage point by 2050, compared to a scenario assuming constant demographic structure as in 2000. The precise impact will however vary among the individual economies concerned due to the differences in demographic profile and severity of the aging problem (IMF, 2004).

Fiscal sustainability is another important area deserving close attention. On fiscal revenue, the shrinkage in the working population is likely to bring about a concomitant narrowing of the income tax base. Moreover, in tandem with the slower pace of economic growth, corporate profitability and other revenue-generating activities will be curtailed. On the expenditure side, population aging can be expected to generate greater demand from the elders for medical and health care, long-term residential care services and social security payments. In the case of Hong Kong, China where the delivery of health care and other social services primarily rests with the Government, the consequential strain on the public finances should not be taken lightly. As a spill over effect, there may also be some crowding out of public expenditure in other spheres, such as education and infrastructural investment (IMF, 2006).

Last but not the least, population aging may carry additional implications on the development of financial markets, as there may be a shift in the composition of investment portfolio away from higher risk bearing assets (e.g. equities) to lower risk bearing ones (e.g. debentures). This will generate downward pressure on real equity prices and, along with it, further dampening effect on future economic growth.

4. RESULTS OF AN EMPIRICAL STUDY ON HONG KONG, CHINA

A simple empirical study has been carried out to examine the likely economic impacts of population aging in Hong Kong, China, in particular on its long term economic growth potential. As stated earlier, the labour force in Hong Kong, China is projected to decrease from 2015 onwards, as a result of population aging. In addition, investment growth would moderate owing to reduced savings or investible capital and also lower asset yields. Unless with sustained and significant productivity gain, these developments would pose a down drag on overall economic

growth in the long run. What is more, the associated reduction in tax revenue would aggravate the fiscal position and raise the risk of higher real interest rates, should more public debts be issued as a result. This might also crowd out the private sector borrowers, thereby exerting further downward pressure on investment.

In order to quantify such an impact, a simple regression model of potential output has been constructed for Hong Kong, China. Potential output is taken as the economy's production capacity assuming normal intensity of usage of factors of production. A Cobb-Douglas production function is used as the functional form for modeling output in terms of factor inputs i.e. labour and capital stock. For the purpose of estimating the production function, the data series on two types of capital stock, viz. building and machinery, have been compiled by cumulating the corresponding gross investment flows, net of depreciation based on a declining balance schedule with different depreciation rates being applied to building and machinery investment respectively⁴.

As for the labour input, there are two noteworthy points. *First*, based on the employment earnings data for different age cohorts enumerated from household surveys, it is observed that people's earnings generally peak after the age of 40, particularly so for people with higher education level whose income may reach the peak at an even later stage of their working life, reflecting the gain in productivity through accumulation of working experience. Thus, the age profile of an economy's workforce has in fact significant implications on the overall productivity. In this connection, an augmented employment series is constructed to take into account the productivity implications of changing age structure over time. *Secondly*, the composition of an economy's workforce by employment status is also crucial to productivity. As such, the total employment used in the production function has been further adjusted to exclude the underemployed workers, i.e. those involuntarily having shorter hours of work.

Under this specification, the actual level of output can be expressed as a function of age-adjusted employment (excluding underemployed persons), occupied building stock and machinery stock, adjusted for variations in the intensity of usage of factor inputs plus a measure of structural transformation to capture the general productivity lift when the economy moves towards the service-based and higher value-added activities. That is:

$$\begin{aligned} \log(Y_t) &= a_1 \log(l_t L_t) + a_2 \log(b_t B_t) + a_3 \log(m_t M_t) + a_4 \log(\rho_t) \\ &= a_1 \log(L_t) + a_2 \log(B_t) + a_3 \log(M_t) + a_4 \log(\rho_t) + \{a_1 \log(l_t) + a_2 \log(b_t) + a_3 \log(m_t)\} \end{aligned}$$

where:

Y	=	Real GDP
L	=	Age-adjusted employment * (1- underemployment rate)
B	=	Occupied building stock (both public and private sectors)
M	=	Machinery stock
l, b, m	=	Intensity of usage of various factor inputs ⁵

⁴ The assumed depreciation rates for machinery stock and building stock, though necessarily with some degree of subjectivity, are the result of a sensitivity search after testing different depreciation rate assumptions to derive the potential GDP and output gap estimates that can better explain the price trend in Hong Kong.

⁵ The inclusion of measures of intensity of usage in the production function is based on the proposition that any unexpected variations in output in the short run are usually absorbed by changes in the intensity of usage of the factor inputs, as adjustment in the levels of capital and labour will take some time to achieve. Instead of separately quantifying the intensity of usage for each type of factor inputs, the overall intensity of usage of factor inputs is proxied by:

$$\{a_1 \log(l_t) + a_2 \log(b_t) + a_3 \log(m_t)\} = \{a_5 \log(I_t) + a_6 \log(I_t L_t)\}$$

where I_t is defined as the ratio of the growth rate of Y_t to its 7-year centred moving average, and $(I_t)_L$ is a weighted average of lagged I_t covering periods $t-1$ to $t-4$.

□ = Share of services sector employment

The production function is estimated by using the annual data series from 1986 to 2005. The estimated parameters are all found to be correctly signed, as shown below:

	$\log(L_t)$	$\log(B_t)$	$\log(M_t)$	$\log(\rho_t)$	$\text{Log}(I_t)$	$\text{Log}(I_t)_L$
$\text{Log}(Y_t)$	0.5964	0.4856	0.1664	0.3315	0.6932	1.3948
	(2.06)	(2.38)	(1.28)	(1.01)	(5.83)	(3.82)

$R^2=0.9974$

* t-statistics are in the parenthesis

The potential output is obtained from the above estimated parameters, assuming full-employment condition and also with normal intensity of usage of factor inputs, i.e. when the unemployment rate is at its natural rate and $I_t=1$.

To be consistent with the official population projections, the projection timeframe of potential output covers the period up to 2033, based on the following assumptions: (i) the labour force will decline after 2023 at an average annual rate of 0.9 percent; (ii) the growth in building and machinery investment will gradually slow down after 2010; (iii) the share of services sector employment will continue to edge up, from 86 percent in 2005 to around 90 percent in 2033. The estimation results show that compared with 2010, the 5-year trend growth rate of potential output would be curtailed by around 0.8 of a percentage point in 2020, along with population aging. By 2030, the trend growth would be curtailed by another 0.4 of a percentage point, thus resulting in a 1.2 percent fall in 20 years' time.

But the above projection results have to be interpreted with caution. First, they are generated by a static model and have not taken into account any possible enhancement in productivity in the future, granting that the relative scarcity of labour may provide economic incentives to develop new methods of production and therefore encourage more technological innovation. Secondly, they depend critically on the underlying assumptions adopted especially regarding investment growth, size of the labour force, and the pace of structural transformation of the economy which are subject to a high degree of uncertainties.

Furthermore, it is worth noting that Hong Kong, China persistently has a very high savings rate, reflecting the overall habit of thrift in the local community and also the functioning of an efficient financial sector which has enhanced people's propensity to save. Gross savings averaged at over 30 percent of GDP in the past 20 years, with the private sector (comprising both households and corporations) being the major supplier of savings. On the other hand, public savings constituted a less important source, attributable in part to the prudent fiscal policy hitherto pursued by the Government so as to minimize any crowding-out effect on private sector resources. As for the investment-to-GDP ratio, it has declined quite notably in recent years, largely due to the prolonged sluggishness of construction activity in the aftermath of the Asian financial crisis (Table 6).

Taking saving and investment together, it is noted that Hong Kong, China has enjoyed positive saving-investment balance during most of the time over the past two decades, reflecting a lower level of consumption than production in the economy

(Figure 11). This should have rendered some cushion to the drag on saving rate stemming from the aging trend. Moreover, based on the information collected in the latest official Household Expenditure Survey, there is no clear evidence that household savings rate bears an inverse relationship with the age of household head⁶. As such, it is hard to assert at this juncture whether the overall savings rate will necessarily decline significantly along with the ageing of population in Hong Kong, China.

The above serve to illustrate that population aging is a complex and wide ranging subject straddling many different segments of the economy. A full understanding of all the issues involved will inevitably call for a comprehensive and in-depth study, which is however outside the scope of the current project. Even so, the analytical framework used herein may still serve as a useful reference for future research work in this area.

5. SOCIAL WELFARE POLICIES AND MEASURES PERTAINING TO THE ELDERS IN HONG KONG, CHINA

A stock-taking has been made of the policies and measures adopted hitherto by the HKSAR Government towards the elders. As far as social welfare is concerned, the following measures are relevant:

Comprehensive Social Security Assistance (CSSA) Scheme

The objective of the CSSA Scheme is to provide a safety net for those individuals or families unable to support themselves financially for such reasons as old age, disability, illness, low earnings, unemployment or special family circumstances (e.g. single parent). The individuals or families concerned would receive income support up to a prescribed level to meet their basic and essential needs. In addition, they are entitled to free medical treatment at public hospitals and clinics. As at end- 2006, the total number of CSSA cases was 295 333, over half of which belonged to old-age cases with recipients aged above 60.

In the 2005-06 financial year, total CSSA expenditure amounted to HK\$17.8 billion (US\$2.3 billion), representing 7.1 percent of the overall public expenditure or 1.1 percent of GDP. Around HK\$8.1 billion (US\$1.0 billion) was spent on the old age cases. At present, the standard rates for such cases range from HK\$2,280 to HK\$3,885 (US\$300-500) per month, depending on the degree of disability involved. Additionally, there are supplements or special grants to cover rent, medically-recommended diet, and costs of medical and rehabilitation appliances. A recent estimate puts the CSSA payment per old age case at an average of around HK\$4,500 (US\$580) per month.

Social Security Allowance (SSA) Scheme

Under this Scheme, a monthly allowance is granted to Hong Kong, China's residents who are severely disabled, or who are aged 65 or above to meet special needs arising from disability or old age. However, it is not applicable to the CSSA recipients.

More specifically, the Old Age Allowance (OAA) under this Scheme is provided on a flat rate basis to the eligible elders. There are two types of OAA. The normal

⁶ The Household Expenditure Survey is not designed to produce data on household income and savings rate. Its primary purpose of the survey is to collect data on household expenditure by categories for updating the expenditure weights for compiling the Consumer Price Indices. Data on income are collected merely for consistency check on the reported expenditure. As such, the quality of income data may be subject to fairly wide margin of error.

OAA (at HK\$625 per month) is applicable to those elders aged 65-69 with their total income and assets below the stipulated limit (subject to means test), and the Higher OAA (at HK\$705 per month) to all the elders aged 70 or above (non means-tested).

As at end- 2006, the number of Normal OAA cases was 76,356 and that of Higher OAA cases was 388,469. In the 2005-06 financial year, total welfare payments to the elderly recipients under the Scheme amounted to HK\$3.7 billion (US\$0.5 billion), accounting for 1.5 percent of the total public expenditure or 0.2 percent of GDP.

Taking the CSSA and OAA Schemes together, there were more than 600,000 persons aged 60 or above receiving direct financial assistance (excluding health care related expenditure) of about HK\$11.8 billion (US\$1.5 billion) in 2005-06. These two schemes are both non-contributory and funded entirely out of the General Revenue. In view of the projected trend of population aging, the amount of social security payments to the elderly can be expected to surge in the years ahead.

Other welfare services for elders

“Care for Elders” has long been one of the HKSAR Government’s strategic policy objectives. This can be manifested partly by the marked increase in public resources devoted to the provision of elderly services. Between 1995-96 and 2005-06, recurrent expenditure on welfare services for the elders almost tripled from HK\$1.2 billion to HK\$3.1 billion, giving an average annual growth of 10.4 percent. Suffice to say that while the existing services have been greatly enhanced in terms of both quantity and quality over the years, new services have also been introduced, for instance, in the spheres of community support and residential care services, with a view to meeting the holistic needs of the old aged people.

In sum, out of the total public expenditure on social welfare in 2005-06 (HK\$33.8 billion or US\$4.4 billion), more than two-fifths (or around HK\$15 billion or US\$1.9 billion) were directly related to the old aged population. Compared to 1995-96, this particular type of spending rose substantially by 126 percent or an average of 8.5 percent per annum. As the aging trend is projected to accentuate in the future, social welfare expenditure on old age is likely to grasp an even larger share of the “pie”, thereby imposing extra strain on the public resources.

6. OTHER MEASURES IMPLEMENTED IN HONG KONG, CHINA

The HKSAR Government has concurrently implemented a series of other measures i.e. outside the social welfare arena to help address the problem of population aging.

Population policy

In 2003, a revamp of the population policy was undertaken to ensure sufficient flexibility in future policy formulation and implementation for better response to the evolving demographic and market conditions. Consequential upon the revamp, the following measures were introduced: i) an alignment of admission conditions for professionals and talents from the Mainland China with those from other sourc-

es in July 2003⁷; ii) launch of the Capital Investment Entrant Scheme in October 2003 to cater for those people who intend to make substantial investment (HK\$6.5 million) in Hong Kong, China but do not themselves run a business; iii) granting of the same level of tax deduction for all children irrespective of number, as from the 2003-04 assessment year⁸; iv) tightening up of the eligibility criteria for CSSA as from 1 January 2004, so that such social security benefits would be available only to residents who comply with the seven-year residence rule (except for children under the age of 18); and v) introduction of portable CSSA Scheme for elderly retirees to continue to receive cash assistance if they choose to retire permanently in the Guangdong and Fujian provinces of Mainland China, probably for family union or to take advantage of the cheaper cost of living and more spacious living environment there.

More recently, the HKSAR Government introduced the Quality Migrant Admission Scheme (QMAS) in mid 2006. Under this new scheme, talented people from the Mainland China and overseas who meet specific eligibility criteria⁹ will normally be granted an initial stay of 12 months in Hong Kong, China, accompanied by their spouses and unmarried children below the age of 18, without the requirement of securing an offer of local employment beforehand. At the end of this period, the entrants admitted should be able to demonstrate that they have taken steps to settle in Hong Kong, China by taking up residence here, e.g. by securing gainful employment or establishing a business. The scheme is quota-based and operated on a points-based system, with an initial annual quota of 1 000. High scoring applicants will be short-listed for selection by a non-statutory advisory committee having regard to the socio-economic needs of the community, the sectoral mix of the short-listed applicants and other relevant factors. Results of the first selection exercise were announced in November 2006, with 83 applications approved in principle. This scheme can be expected to facilitate economic development in Hong Kong, China which will in turn create more job opportunities for the local workforce. It will also help improve the overall quality of the population.

Retirement scheme

In order to assist the workforce to accrue financial resources for retirement protection, the Mandatory Provident Fund (MPF) system was implemented in 2000. The system is privately managed, equitable and financially sustainable. As defined contributions are included, the problems as generated by the pay as you go system practised in some overseas economies can be avoided. By end-2006, 98.5 percent of the employers, 97.7 percent of the employees and 74.5 percent of the self-employed persons have been covered by the MPF schemes. In a separate move, the HKSAR Government has also changed the original defined-benefit scheme for the civil servants to a defined-contribution scheme for the new recruits as from June 2000.

⁷ The Admission Scheme for Mainland Talents and Professionals (ASMTP) was implemented since 15 July 2003, aiming at attracting qualified Mainland talents and professionals to work in Hong Kong in order to meet the economy's manpower needs and enhance its competitiveness in the globalised market. From the inception to end-2006, a total of over 16,000 applications had been received, among which over 14,000 cases were approved. The ASMTP was introduced to complement the well-established General Employment Policy (GEP), under which some 20,000 overseas professionals (including Chinese nationals residing overseas for more than one year) are admitted into Hong Kong, China every year.

⁸ Before implementation of this budget measure, child allowance was granted under a "two-tier" arrangement with the first two children being granted an allowance of HK\$30,000 each, while that for the third to the ninth child was halved. This arrangement, whilst unlikely to have a significant impact on the child-bearing decision, seemed to be inappropriate in light of the very low fertility rate in Hong Kong, China. The child allowance was later lifted further to HK\$40,000 as from the 2005-06 assessment year.

⁹ The applicants of QMAS must (i) be aged between 18 and 50; (ii) be able to demonstrate that they are capable of supporting and accommodating themselves and their dependants, if any, on their own without relying on public assistance during their stay in Hong Kong, China; (iii) have no criminal or adverse immigration record in Hong Kong, China or elsewhere; (iv) be proficient in written and spoken Chinese (Putonghua or Cantonese) or English; and (v) have a good educational background, normally a first degree from a recognised university or tertiary educational institution.

Health care reform

As part of its medical reform initiatives, the HKSAR Government has recently arranged public consultation on the future health care delivery model. It is likely that the existing health care system, whereby 95 percent of the cost for in-patient care is subsidized by the General Revenue, will not be financially sustainable in the long term, if the population ages at the pace as indicated by the official projections. The latest statistics show that in the 2005-06 financial year, nearly half of the cost of services of the Hospital Authority was spent on health care to the elders, corresponding to some HK\$13 billion (US\$1.7 billion). As stated in the discussion paper "Building a Healthy Tomorrow", currently about HK\$22 out of every HK\$100 tax revenue is devoted to public health care expenditure. Under a do-nothing scenario, by 2033 over half of the tax revenue will be required for financing the same level of public health care services as at present. An urgent overhaul and reform of the medical services segment is thus necessary. Recommendations put forth for the public consultation include, inter alia, a re-positioning of the public hospital system to target its services more at the low income and under-privileged groups. Also, private hospitals are encouraged to take on a more active role in providing hospital services outside the priority areas of public hospitals. Besides, the private sector should assume a greater role in the primary medical care of the elderly, such as rendering out-reach services to residential care homes. The aim is to ensure that the limited public resources available are utilized in an optimal manner and directed to the needy.

Improving quality of workforce

The HKSAR Government is well aware of the importance of upgrading the quality of human capital for overall economic prosperity. Thus, apart from admitting overseas talents and professionals to supplement the local workforce, the Government has devoted considerable efforts to nourishing the talent and skills of the local people. This is borne out by the vast investment in education, which corresponds to almost one-quarter of the total recurrent government expenditure in the 2006-07 financial year. As to nurturing younger generation, Hong Kong, China has already attained the target of making provision for 60 percent of our secondary school leavers to receive post-secondary level of education in 2005-06 academic year. In fact, the quality of labour force (excluding foreign domestic helpers) in Hong Kong, China has been greatly enhanced over the past decade and looks set to improve further in the coming years. As an indication, the proportion of tertiary degree holders in the local labour force aged 25 or above doubled from 10 percent in 1995 to 20 percent in 2005 (Figures 12 and 13).

Also, the Chief Executive has announced in his latest Policy Address an initiative to provide fee assistance in the form of "education voucher" to parents of children aged three to six, starting from the 2007-08 school year. The proposed scheme is expected to benefit 90 percent of the relevant students, whilst more than 80 percent of kindergartens will be eligible to redeem the "education voucher" according to their student intake. Such a voucher scheme, by allowing freer parental choice of kindergartens, would help improve the quality of pre-primary education in Hong Kong, China through market forces over time.

On encouraging the local workforce to enhance their skills and continue life-long education, the Government has set up the Skills Upgrading Scheme with a provi-

sion of HK\$400 million in 2001. A total of 23 industries are now covered by the Scheme. In 2002, a \$5-billion Continuing Education Fund was also established, which provides subsidies to adults with learning aspirations to attend further education and training courses in certain specific economic sectors and skill domains. By end-2006, over 300,000 applications have been received, of which more than 90 percent were approved. Furthermore, the Government provides an annual subvention to the Employees Retraining Board, which offers around 100,000 retraining places a year to the eligible workers to help them take on new or enhanced skills and improve their employability. The amount of subvention for the year 2006-07 exceeds HK\$350 million. In October 2000, the Project Yi Jin (PYJ) was separately launched to provide an alternative progression pathway for those secondary school leavers who perform less well in conventional schooling, and also for those mature students who do not have the opportunity to complete secondary education. More than 28,000 students have benefited from PYJ thus far. In the 2006-07 Budget, an additional HK\$60 million has been earmarked for the Intensive Employment Assistance Projects, and another HK\$20 million for assisting the low-skilled unemployed persons to rejoin the workforce.

On top of all these, a cross-sectoral Qualifications Framework (QF) and associated quality assurance mechanism are being formulated, with a view to promoting life-long learning and enhancing the capability and competitiveness of human capital in Hong Kong, China. The QF provides a seven-level hierarchy that supports and orders the academic, vocational and continuing education qualifications. Each level is identified by a set of generic level descriptors to assure uniformity and coherence of qualifications at different layers within the framework.

Promoting parenthood and fertility

Whilst acknowledging that the decision to have children is basically a matter of individual choices, the HKSAR Government has regularly reviewed its policies to see whether they would unduly discourage childbirth. A notable example is the newly proposed voucher system for pre-primary education, which will reduce one of the major hindrances, viz financial concerns, to childbearing for many parents, in addition to granting the same level of tax deduction for all children (at a maximum number of 9) starting from the 2003-04 tax year.

On public health care, the Government provides world-class quality pre- and post-natal medical care and advisory services for maternity, child rearing, parenting, etc. Furthermore, the Social Welfare Department renders supporting services to help relieve the pressure of working females in making childbirth plans. The services provided via non government organisations include subvented day nurseries and crèches care for young children, and other ancillary services such as extended-hour service, occasional child care service, after-school care, financial assistance for child care centre service to needed families, etc.

On protection of pregnant employees, the Employment Ordinance provides effective maternity protection, including maternity leave and pay, employment protection against termination of employment, prohibition of assignment of heavy, hazardous or harmful work, etc. In addition, the Labour Department encourages employers to create a “family-friendly” working environment, adopt “employee-oriented” good personnel management practices, and implement such practices through understanding and caring for employees’ needs including their family

needs. The recent implementation of five-day work week in phases by the HKSAR Government can be viewed as an initiative to alleviate further the pressure of the working population, improve the quality of their family life, and to a certain extent partly reduce the hindrances to childbearing.

Promoting active and healthy aging

Population aging presents a great challenge to the community as a whole. The government, business, non government organizations, and individuals should take co ordinated efforts to manage the natural consequences of aging and are encouraged to adopt a positive attitude towards the issue. Apparently, aging is more of a problem if people are unhealthy and unable to be self reliant, thereby resorting to public assistance and support. Yet according to a recent international survey on retirement, the people in Hong Kong, China generally prefer to work longer and save more to finance their own old-age expenses rather than seeking public assistance through social security¹⁰. Over the years, the HKSAR Government has been striving hard to promote active and healthy aging. This is essentially in line with what has been advocated by the World Health Organisation¹¹, which calls on the community to support and enhance the capacities of older people to enable them to remain productive in the economy.

The Government has also been working in close collaboration with the Elderly Commission. The latter has identified four priority areas for the promotion of active aging, including lifelong learning, financial security, retirement and work practices, intergenerational solidarity, and transportation/built environment. Separately, the Hong Kong Jockey Club has launched a major programme “CADENZA: Initiatives for Seniors”, with a view to shifting the attitude and mindset of the community towards positive and active aging. This is a five year project with a funding of up to HK\$380 million. Hopefully, through the programme, a new culture and a sustained force to support the elderly will be generated.

On provision of housing, at present about 60 percent of the elders are living in Government subsidized housing, including public rental housing and purchased flats under the Home Ownership Scheme. In recent years, the number of elderly households on the waiting list for public housing has been on the decrease to around 6,800, from around 16,000 in 1997. Meanwhile, the average waiting time for the single elders applying for public housing has shortened from about 4.5 years to around 1 year.

In a move to enhance mobility of the older people, public transport operators, including franchised bus companies, railway companies, Tramways, individual green minibus and ferry operators have all been offering half-fare concessions or discounts to the elders.

These apart, other policy initiatives that can enhance flexibility of Hong Kong, China’s economy and upgrade productivity of the local workforce are also considered to be conducive to mitigating the adverse impacts of population aging. These include, for example, better living and business environments for foreign investors, more flexible employment arrangements to encourage higher labour force

¹⁰ HSBC, “The future of retirement in a world of rising life expectancies – attitudes towards aging and retirement: a study across 10 countries and territories,” 2006.

¹¹ World Health Organisation (WHO) developed a Policy Framework on Active Aging for the Second World Assembly on Aging in 2002 to help countries meet the challenges of population aging. Active aging is defined as the process of optimising opportunities for health, participation and security in order to enhance the quality of life as people age.

participation from the elders and females, etc. Relative to many other economies, Hong Kong, China has a smaller proportion of economically active females and elders (Tables 7 and 8). Indeed, the projected shrinkage in the labour force in Hong Kong, China as from the mid-2010s is due in no small part to the rising share of the elders and females in the population, thereby leading to lower labour force participation rate (LFPR) in the future. Should constant demographic structure be assumed, the LFPR would remain broadly stable in the coming years (Figure 14).

7. MEASURES FOR TACKLING POPULATION AGING IN MAJOR OVERSEAS ECONOMIES

Given that population aging is a cross cutting issue involving many different aspects, no single policy measure is deemed as adequate on a stand alone basis. A multi-pronged approach is considered to be a more pragmatic and viable option. The associated measures can be broadly categorised into three main types.

The first type involves *reform of pension/retirement scheme*. One of the prime concerns generated by population aging is fiscal sustainability particularly with regard to the defined-benefit pension plan which is funded entirely by the tax revenue. Clearly policy makers may tackle this by simply shifting away from the tax-funded, pay-as-you-go system to alternative systems funded with private accounts. Yet this is far from a complete solution. For all the pension systems, whether funded or not, they would entail a transfer of resources from workers to employees. In the case of a tax-based retirement system, the workers concerned pay taxes, which go directly to the public coffer and subsequently to the retirees. As to a funded pension system, workers save and buy assets from retirees. As such, the problem brought about by population aging under a pay-as-you-go system is probably higher tax burden on the working population, whereas under a funded system, more and more retirees will try to sell the assets accumulated over their working life to a smaller next generation, thereby generating downward pressure on asset prices (Mckinsey, 2005). Therefore, unless the overall savings rate is raised, the shift from a pay-as-you-go system to a funded one will not really offer much help. As a remedial measure, the government should encourage voluntary savings for retirement, as well as strive to maintain the fiscal prudence. Furthermore, under a funded system in which workers accrue money in their private accounts, it is imperative to institute greater flexibility in the choices of investment vehicles by pension funds for boosting their investment returns so that more resources can be made available for their retirement life. Also, policy makers may consider lifting the retirement age as a means to arrest, if not revert, the declining trend of the working population.

The second type of measures entails a *reform of the social security and health care systems, as well as a reform of the taxation system*. The aim is to reduce excessive generosity of and thus over dependency on public resources. Self-reliance in the community can then be enhanced. As far as practicable, private sector participation should also be encouraged in the provision of health care services. As for reform of the taxation system, the measures taken should be geared towards inducing higher labour participation especially from females and the elders, apart from broadening the tax base.

The third type of measures relate to *reform of manpower policy*. Policy makers should design a more flexible population policy, particularly with regard to impor-

tation of professionals and skilled personnel. For some advanced economies facing an aging and shrinking labour force, they may consider outsourcing production activities to the developing countries to take advantage of the abundant and cheaper labour supply there, although this option may not always be viable politically. Additionally, policy makers may strive to upgrade the productivity of the existing workforce via better education and training support. Other reform measures leading to a more flexible economic structure and higher factor productivity will also be helpful.

Outside these three main types, there are several types of supplementary measures. For instance, policy makers may consider re-prioritizing and if necessary restraining the growth of non-aging activities for attaining better fiscal balance. Continuous effort may also be devoted to upgrading the efficiency of financial intermediation and improving the channelling of savings into productive investment, as well as developing a long-term bond market to facilitate the retirees to secure a more stable stream of retirement income.

8. CONCLUDING REMARKS

Population aging is not unique to Hong Kong, China. Both developed and developing economies alike are facing the same phenomenon and the attendant risks and challenges, although the scale and intensity of the problem may differ among them. Whereas the situation in Hong Kong, China does not appear to be too alarming at the present moment, it is of paramount importance for the HKSAR Government to come up with a coherent policy framework soonest possible in coping with the challenges and opportunities ahead, as it normally requires a considerable length of time for public policy to be formulated, deliberated and implemented before producing any real impact on the community. Now is probably not too early to kick start the entire process.

Experiences in overseas economies thus far are not yet conclusive as to whether population aging would definitely drag down the long-term economic growth. Whilst aging has been observed for quite a long time in some of the advanced countries, its effects could have been masked by sustained strong economic growth over the period. Furthermore, the problem of aging itself may have also changed in nature. Old aged people now lead much healthier lives than before, thereby allowing them to prolong contribution to the society. It seems not unlikely that the definition of old age will change over time, as will the general perception of aging. Old age may not necessarily imply a net liability to the community at large. In quite a number of developed economies, a lot of businesses are associated with the “silver hair market” and people are generally inclined to retire at a much older age than previously. So, population aging actually presents both challenges and opportunities for the global economy.

Given that an economy-wide pay-as-you-go pension system does not exist in Hong Kong, China, the adverse effect of population aging on its public finances is expected to be less severe, at least in the short run. Yet since nearly all the provision of financial assistance and social services to the elderly is tax-funded, the possible upsurge in these old-age related public spendings will remain a major cause for concern in the future. In pursuance of the long-serving principle of “small government”, there is a need on the part of the HKSAR Government to overhaul and if

necessary introduce further reforms to the existing social welfare and health care services.

Viewed from a broader perspective, the HKSAR Government has in fact been rendering support to the needy elders in the context of the 3-pillar model for old age financial security¹², as put forth by the World Bank in its report “Averting the Old Age Crisis” in 1994. The overall objective is to develop a long-term sustainable safety net that better targets resources at the needy ones, whilst striving to preserve the simple and low tax regime in the economy. At present the CSSA Scheme, the OAA under SSA Scheme, and the MPF system basically constitute the first and second pillars in Hong Kong, China, but the ultimate goal of providing more comprehensive retirement protection will require more to be done to improve all the 3 pillars in the future. Meanwhile, opportunity should also be taken to exploit where possible the new business opportunities generated by the aging trend. This will call for concerted efforts from all the parties concerned including not only the HKSAR Government, but also non government organisations, the business communities and private individuals.

¹² The “3-pillar” model comprises the first pillar of a compulsory public plan for poverty alleviation and prevention, the second pillar of a privately managed compulsory pension plan for income maintenance, and the third pillar of a voluntary saving-annuity plan for supplementing the two above.

Table 1. Crude birth rate and total fertility rate for Hong Kong, China in selected years

<u>Year</u>	<u>Crude birth rate</u> (per 1,000 population)	<u>Total fertility rate</u> (per woman)
1971	19.7	3.46
1976	17.4	2.48
1981	16.8	1.93
1986	13.0	1.37
1991	12.0	1.28
1996	9.9	1.19
2001	7.2	0.93
2003	6.9	0.90
2005*	8.2	0.97

(*) Revised figures.

Source : Census and Statistics Department, Government of HKSAR

Table 2. Expectation of life at birth for Hong Kong, China in selected years

<u>Year</u>	<u>Male</u>	<u>Female</u>
1971	67.8	75.3
1976	69.6	76.2
1981	72.3	78.5
1986	74.1	79.4
1991	75.2	80.7
1996	76.7	82.7
2001	78.4	84.6
2005*	78.8	84.5

(*) Revised figures.

Source : Census and Statistics Department, Government of HKSAR

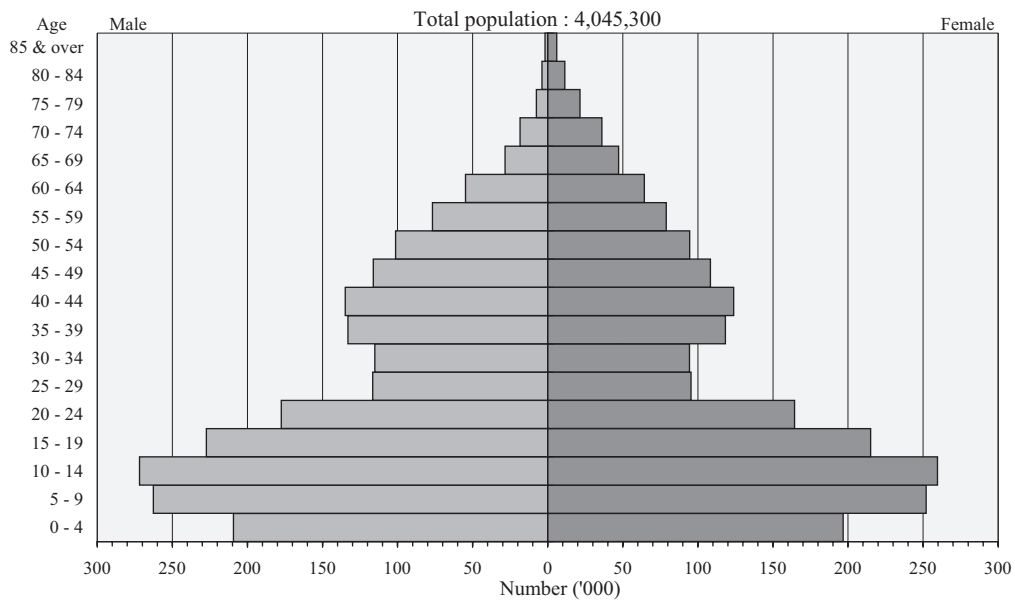
Table 3. Population age structure of Hong Kong, China in selected years

<u>Year</u>	<u>Population share by age group</u>			<u>Median age</u>		
	<u>0-14</u>	<u>15-64</u>	<u>Above 65</u>	<u>Male</u>	<u>Female</u>	<u>Both sexes</u>
1971	35.9	59.6	4.5	21.4	21.9	21.7
1976	30.2	64.3	5.4	23.8	23.8	23.8
1981	24.6	68.7	6.6	26.3	26.2	26.3
1986	23.1	69.3	7.7	28.7	28.9	28.8
1991	20.8	70.4	8.7	31.7	31.6	31.6
1996	18.7	71.1	10.2	34.3	34.1	34.2
2001	16.4	72.4	11.2	37.1	36.6	36.8
2006#	13.8	73.9	12.3	39.9	39.7	39.7

(#) Provisional figures.

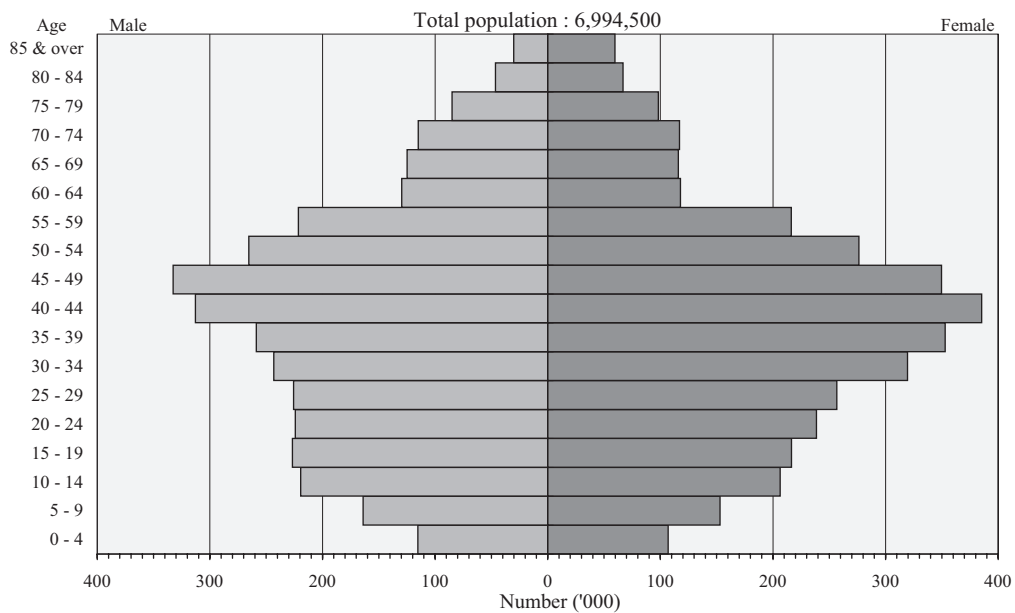
Source : Census and Statistics Department, Government of HKSAR

Figure 1 . Mid-1971 population



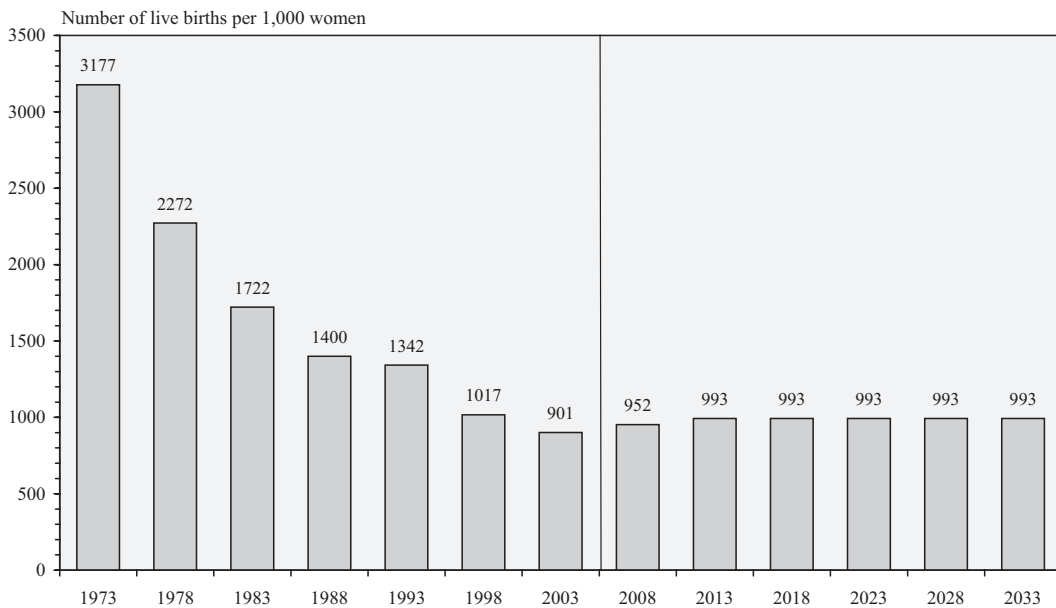
Source : Census and Statistics Department, Government of HKSAR.

Figure 2 . Mid-2006 population



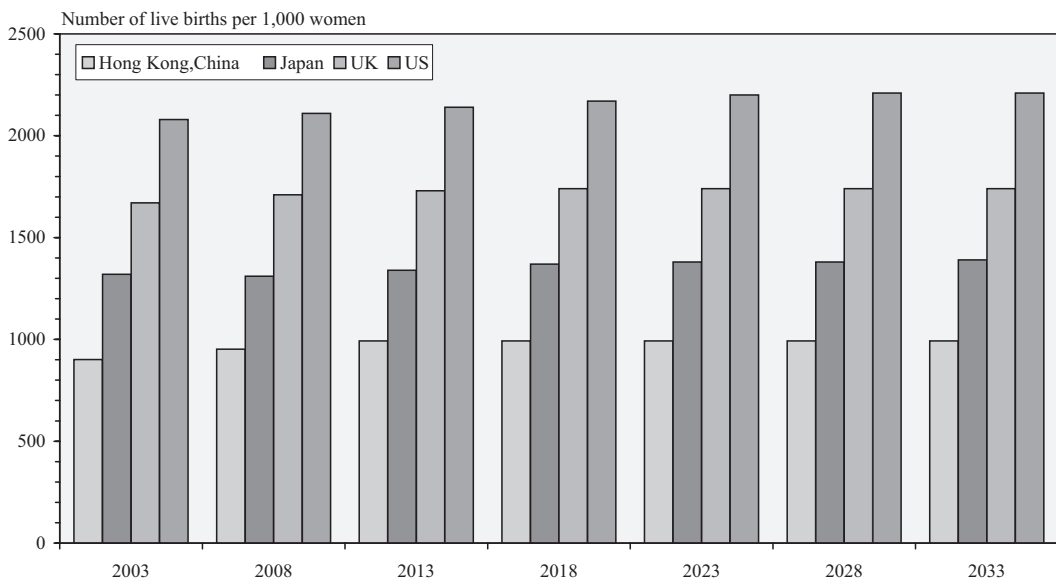
Source : Census and Statistics Department, Government of HKSAR.

Figure 3 . Total fertility rate



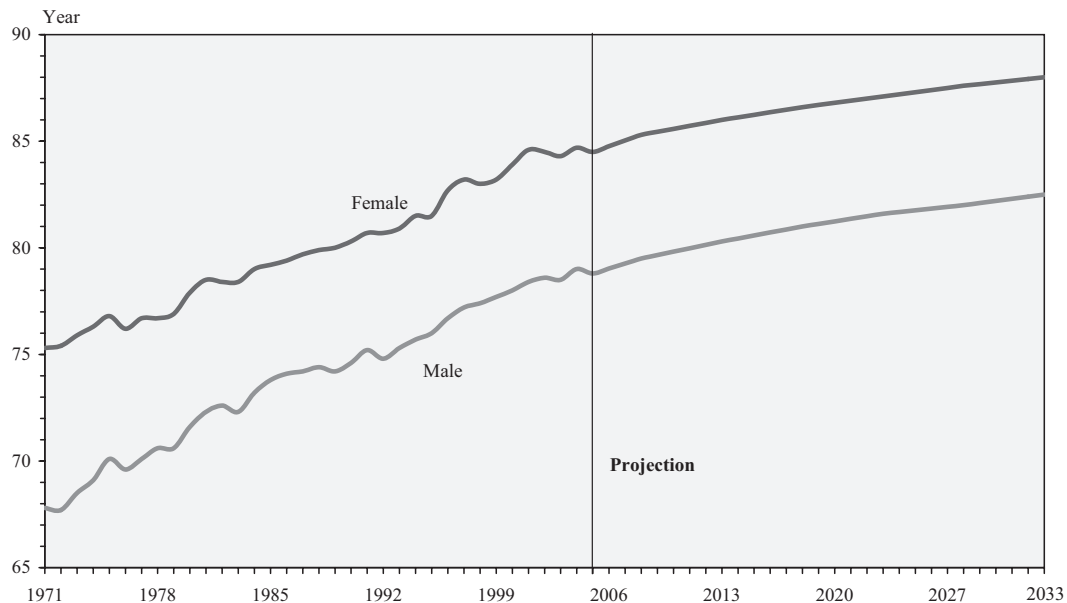
Source : Census and Statistics Department, Government of HKSAR.

Figure 4. Projected total fertility rates of HK,China and selected economies



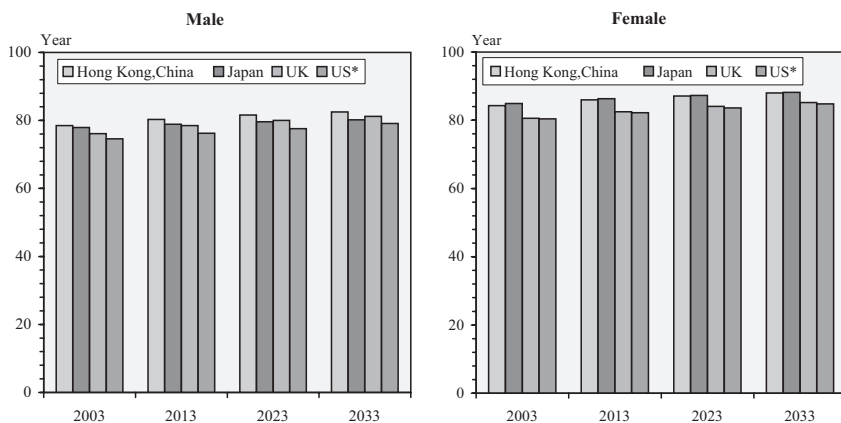
Source : Census and Statistics Department, Government of HKSAR.

Figure 5. Life expectancy at birth



Source : Census and Statistics Department, Government of HKSAR.

Figure 6. Projected life expectancies of HK,China and selected economies



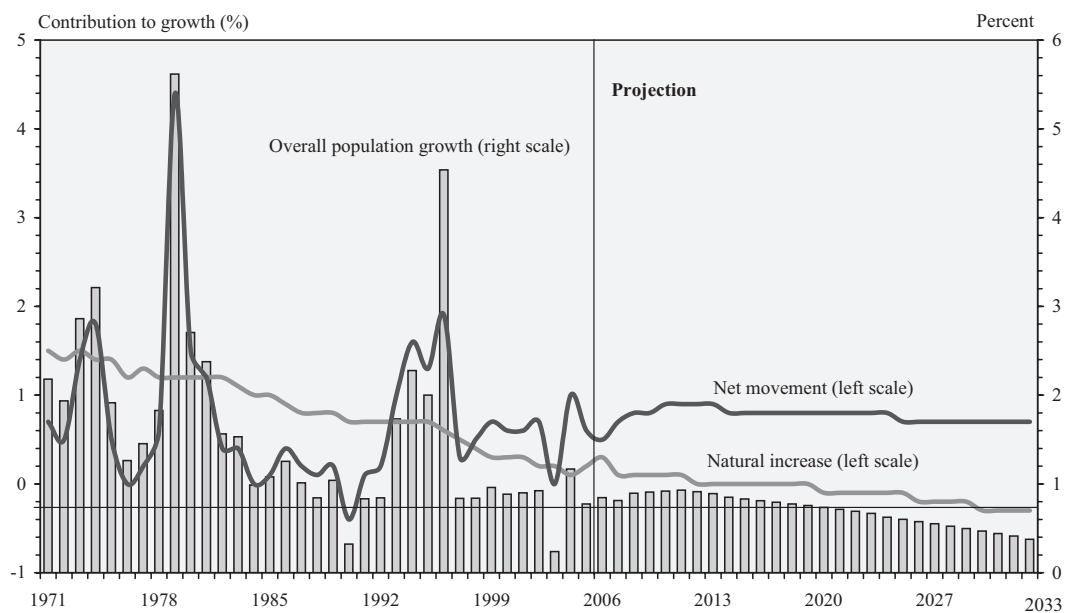
(*) Projections for US refer to the years 2015, 2025 and 2035.
Source : Census and Statistics Department, Government of HKSAR.

Table 4. Population growth in Hong Kong, China

<u>Period</u>	<u>Average annual growth (%)</u>
1971-1980	2.5
1981-1990	1.2
1991-2000	1.6
2001-2006	0.8
<u>Projected</u>	
2007-2015	0.9
2016-2025	0.7
2026-2030	0.5
2029-2033	0.4

Source : Census and Statistics Department, Government of HKSAR

Figure 7. Sources of population growth



Source : Census and Statistics Department, Government of HKSAR.

Table 5. Elderly dependency ratio in Hong Kong, China

Year	<u>All population</u>	<u>Excluding foreign domestic helpers</u>
1971	76	N.A.
1976	84	N.A.
1981	97	N.A.
1986	111	112
1991	125	126
1996	143	148
2001	155	162
2006 [#]	166	173

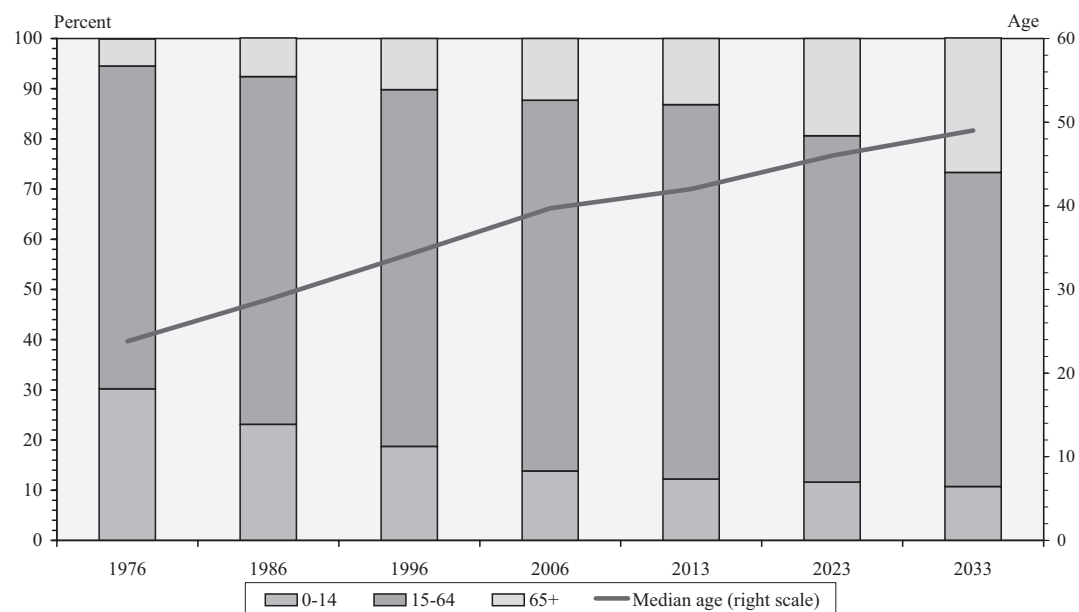
Projected

2008	163	171
2013	178	187
2018	219	232
2023	282	299
2028	362	386
2033	428	458

(#) Provisional figures.

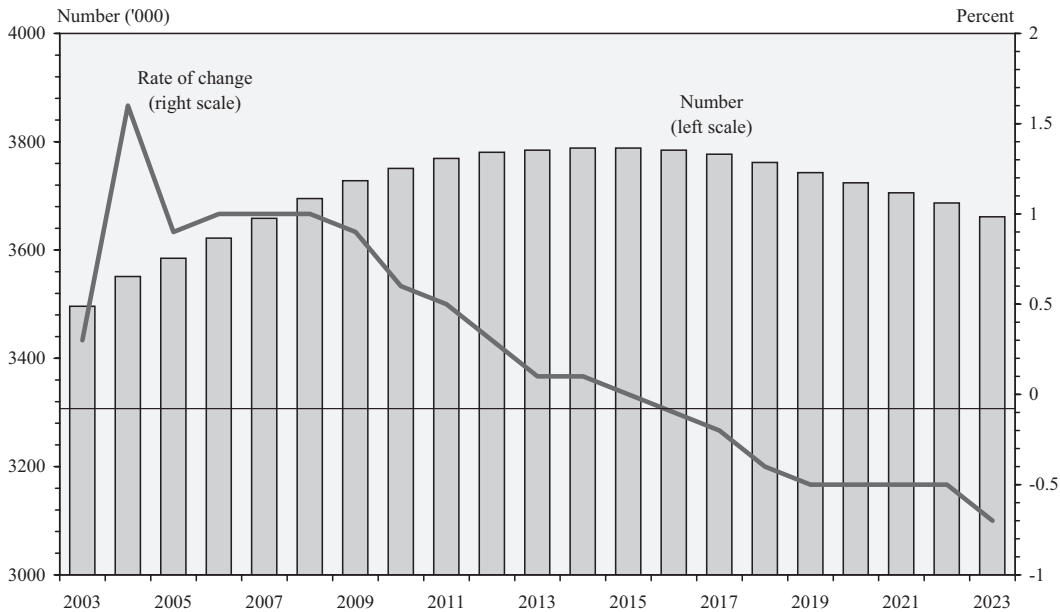
Source : Census and Statistics Department, Government of HKSAR

Figure 8. Share of selected age group and median age



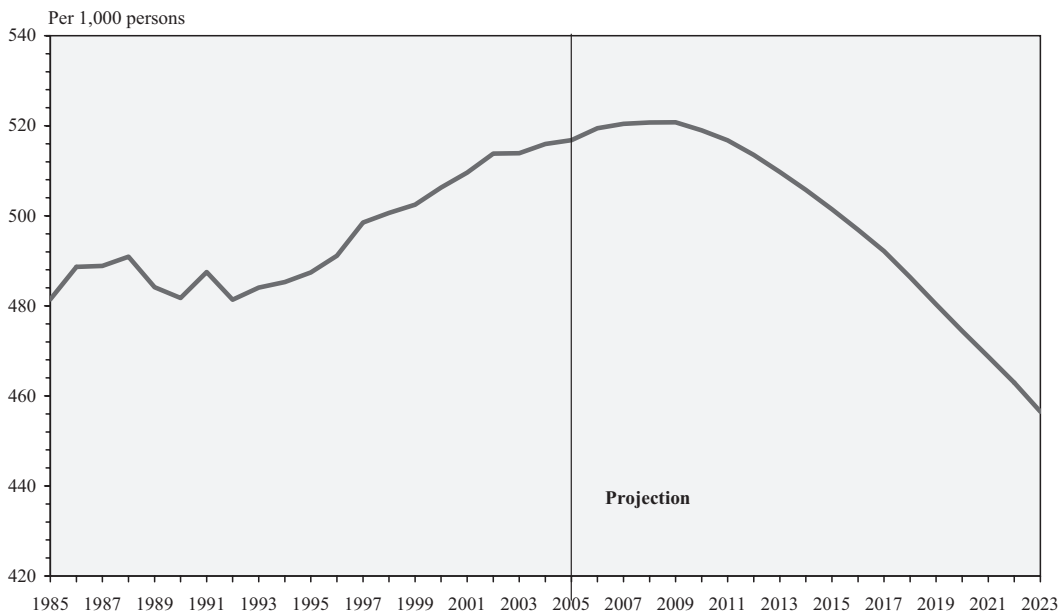
Source : Census and Statistics Department, Government of HKSAR.

Figure 9 . Labour force projection



Source : Census and Statistics Department, Government of HKSAR.

Figure 10. Ratio of labour force to total population



Source : Census and Statistics Department, Government of HKSAR.

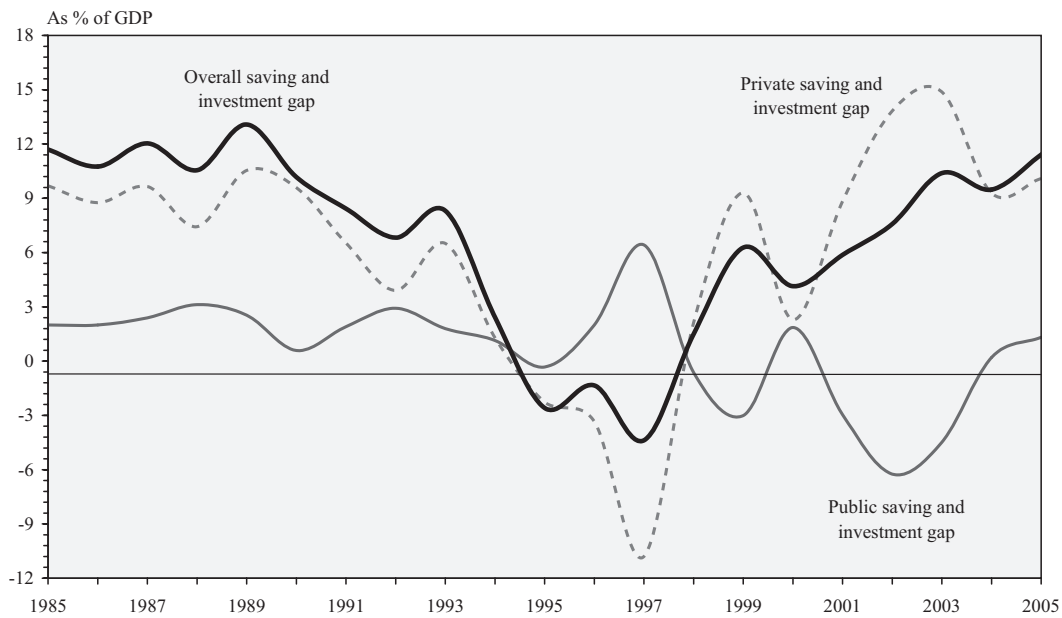
Table 6. Saving and investment in Hong Kong, China

As percent of GDP

<u>Year</u>	<u>Saving</u>			<u>Investment</u>		
	<u>Private</u>	<u>Public</u>	<u>Overall</u>	<u>Private</u>	<u>Public</u>	<u>Overall</u>
1985	27.5	5.2	32.7	17.8	3.2	21.0
1986	27.5	4.8	32.2	18.7	2.8	21.5
1987	30.4	5.2	35.6	20.7	2.8	23.6
1988	29.8	6.0	35.8	22.3	2.9	25.2
1989	33.0	5.9	38.8	22.4	3.3	25.8
1990	32.3	3.9	36.2	22.7	3.3	26.1
1991	29.7	4.9	34.6	23.2	3.0	26.2
1992	28.1	5.7	33.9	24.2	2.8	27.0
1993	29.8	5.4	35.2	23.3	3.6	26.9
1994	26.6	5.0	31.6	25.3	3.9	29.2
1995	22.9	4.5	27.4	25.2	4.8	30.0
1996	22.2	7.3	29.4	25.5	5.3	30.8
1997	17.6	11.1	28.7	28.4	4.7	33.1
1998	27.5	4.1	31.6	25.3	4.7	30.1
1999	29.8	2.2	32.0	20.5	5.2	25.7
2000	24.1	6.5	30.6	21.8	4.6	26.4
2001	30.0	1.5	31.5	21.2	4.5	25.6
2002	32.0	-2.1	30.0	18.2	4.2	22.4
2003	31.9	-0.3	31.6	17.0	4.2	21.2
2004	26.8	4.0	30.8	17.5	3.8	21.3
2005	28.0	4.3	32.3	17.9	3.0	20.9
1985-1995 average	28.9	5.1	34.0	22.3	3.3	25.7
1996-2005 average	27.0	3.9	30.8	21.3	4.4	25.7

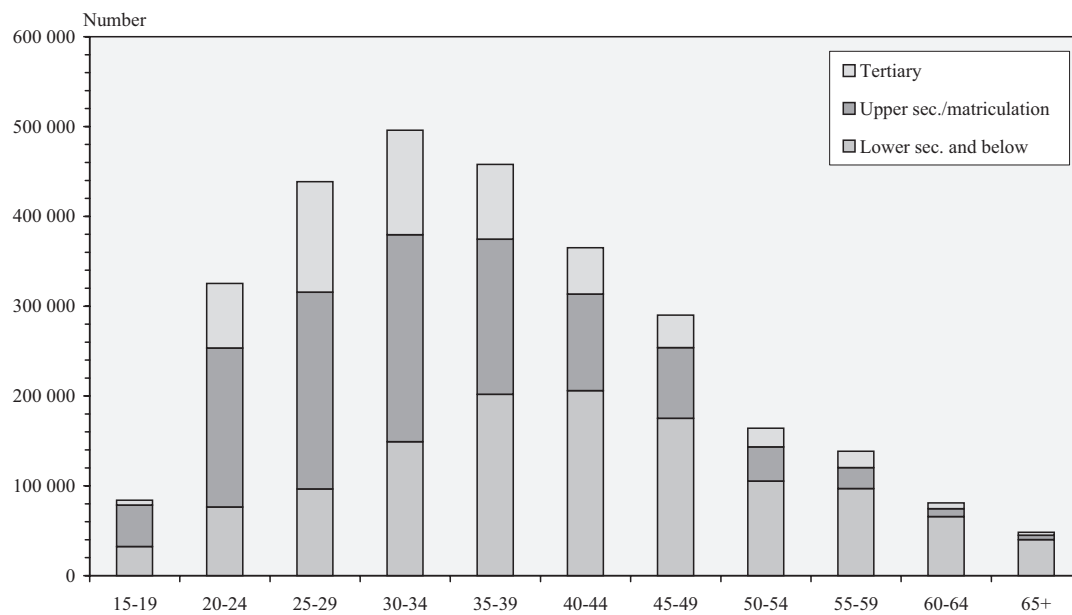
Source : Staff estimates.

Figure 11. Saving and investment gap



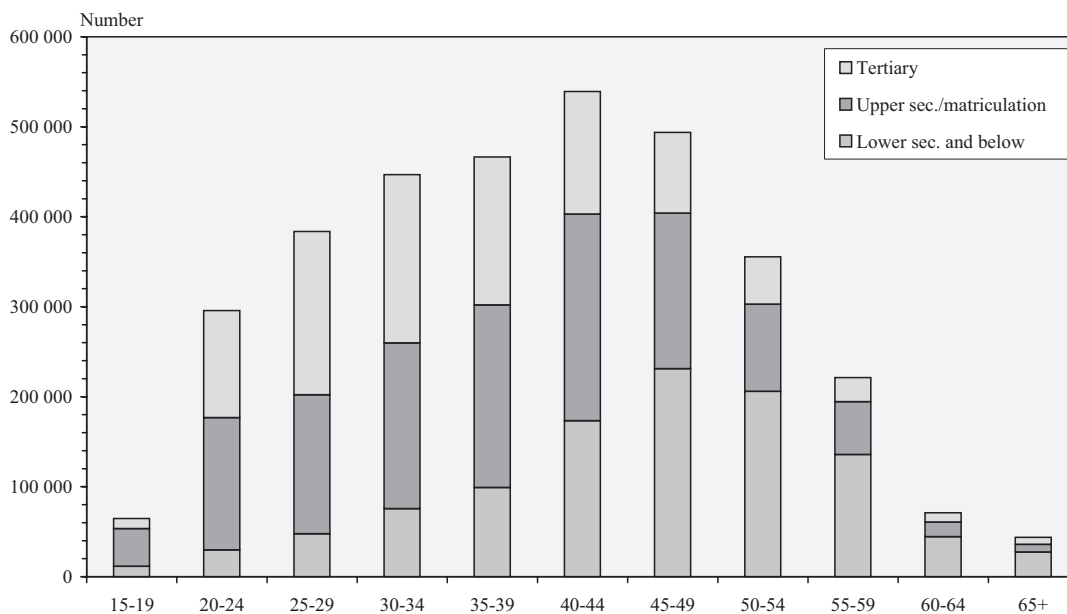
Source : Staff estimates.

Figure 12 . Labour force by age by educational attainment, 1995



Source : Census and Statistics Department, Government of HKSAR.

Figure 13. Labour force by age by educational attainment, 2005



Source : Census and Statistics Department, Government of HKSAR.

Table 7. Labour force participation rate in Hong Kong, China

Age group	1995			2005		
	Male	Female	Both sexes	Male	Female	Both sexes
15-19	22.5	18.7	20.7	16.0	13.4	14.7
20-24	79.2	77.2	78.2	70.2	72.9	71.6
25-29	96.8	82.8	89.2	95.3	86.3	90.5
30-39	98.6	60.9	79.2	96.8	74.8	84.2
40-49	97.5	52.1	75.6	95.4	63.6	78.6
50-59	85.2	34.5	62.0	83.6	44.3	63.9
60-64	50.7	12.5	32.2	44.9	13.6	30.2
65+	15.2	3.0	8.5	9.4	1.8	5.4
Overall	76.6	47.6	62.0	71.1	51.8	60.9

Source : Census and Statistics Department, Government of HKSAR

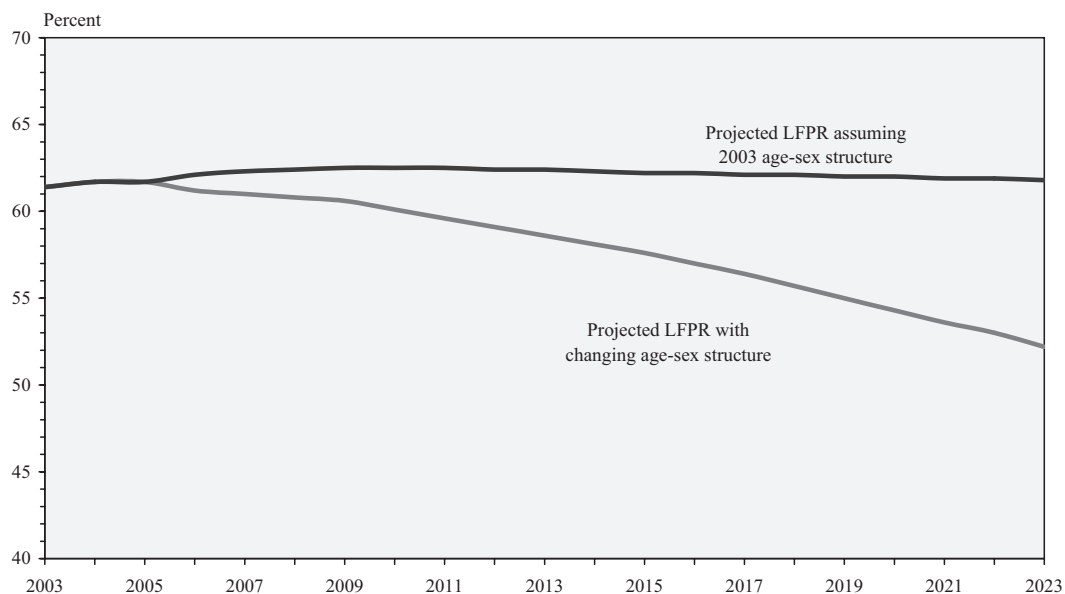
Table 8. Labour force participation rate (LFPR) of Hong Kong, China and selected economies in 2005 (%)

	<i>Aged 15-64</i>				
	<u>HKC</u>	<u>U.S.</u>	<u>U.K.</u>	<u>Japan</u>	<u>Korea</u>
Male	81.0	81.8	82.8	84.4	78.2
Female	59.9	69.2	69.7	60.8	54.5

	<i>Aged 55-64</i>				
	<u>HKC</u>	<u>U.S.</u>	<u>U.K.</u>	<u>Japan</u>	<u>Korea</u>
Male	64.0	69.3	68.1	83.1	74.5
Female	27.6	57.0	49.1	50.8	46.5

Sources : OECD Employment Outlook, 2006
 Census and Statistics Department, Government of HKSAR

Figure 14. Labour force participation rate



Sources : Census and Statistics Department, Government of HKSAR.
 Staff estimates.

REFERENCES

- Boersch-Supan, A., 2001, "Labour Market Effects of Population Aging," NBER Working Paper 8640, December.
- Boersch-Supan, A. and J.K. Winter, 2001, "Population Aging, Saving Behaviour and Capital Markets," NBER Working Paper 8561, October.
- Farrell, D, 2005, "The Economic Impact of an Aging Europe," in special collection Treating Pension Pain, The Mckinsey Quarterly, May.
- Farrell, D, S Ghai and T Shavers, 2005, "The Demographic Deficit: How Aging Will Reduce Global Wealth," in special collection Treating Pension Pain, The Mckinsey Quarterly, March.
- Farrell, D and E Greenberg, 2005, "The Economic Impact of an Aging Japan," in special collection Treating Pension Pain, The Mckinsey Quarterly, May.
- Faruqee, H., 2002, "Population Aging and Its Macroeconomic Implications: A Framework for Analysis," IMF Working Paper 02/16, January.
- HKSAR Government, 2003, *Report of the Task Force on Population Policy*, February.
- HKSAR Government, 2004, *Hong Kong Population Projections 2004-2033*, Census and Statistics Department, June.
- HKSAR Government, 2004, *Hong Kong Labour Force Projections for 2004-2023*, in Monthly Digest of Statistics, Census and Statistics Department, November.
- Hunt, David, S Ramji and P Walker, 2005, "Taking the Risk Out of Retirement", Number 2, The Mckinsey Quarterly.
- IMF, 2004, "How Will Demographic Change Affect the Global Economy," in *World Economic Outlook*, Chapter III, September.
- IMF, 2006, "The Implications of an Aging Population for Hong Kong SAR", in Selected Issues: People Republic of China – Hong Kong Special Administrative Region, (Approved by the Asia and Pacific Department), January.
- OECD, 1995, "Aging Populations, Pension Systems and Government Budgets: How Do They Affect Saving?" Economics Department Working Papers No. 156, July.
- OECD, 2001, "Fiscal Implications of Aging: Projections of Age-related Spending," Economics Department Working Papers No. 305, September.
- OECD, 2006, "Projecting OECD Health and Long-term Care Expenditures: What Are the Main Drivers?" Economics Department Working Papers No.477, February.
- The Mckinsey Quarterly, 2005, "Can Pension Plans age gracefully?", Number 2.

