



POPULATION OUTCOMES: SINGAPORE 2050

Yap Mui Teng
Christopher Gee
(Eds.)

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Foreword

The “population issue” will be long with us. This report contributes to an understanding of the challenges underlying Singapore’s demographic future. That future is likely to be dominated by an ageing population and a labour force growing at a much slower rate than we have been accustomed to for much of our existence as an island nation – unless of course we see a sharp increase in fertility or in-migration. How will the country’s economic, social and political future be affected by these demographic trends? What are the adaptations we need to make to ensure future generations of Singaporeans live, work and play in a sustainable manner?

Population Outcomes: Singapore 2050 (POS2050) has been in long gestation. It was first conceived in 2007, when the Institute of Policy Studies (IPS) embarked on a project to generate scenarios of Singapore’s future population growth, size and age structures till 2050 based on different assumptions of in-migration and fertility rates. The project was later expanded to include a multi-disciplinary review of the implications of the projected demographic scenarios. This review involved 55 individuals drawn from a variety of fields in academia, as well as the private and people sectors. Organised into six study groups, they analysed the data and made 125 recommendations on a range of policy matters -- from land use to housing, from productivity to human and social capital formation, from health sector reforms to ways to raise Singapore’s ultra-low fertility rates.

This report is intended to provide a thoughtful context for all who need to consider the various policy implications of our demographic challenges. Agreement on the range of challenges we face is not possible – and probably not desirable. This report does well to raise, challengingly, the many questions we face without necessarily arriving too hastily at definitive answers.



Something Dr Goh Keng Swee said many years ago might be pertinent here. “We in Singapore,” he said, “believe in hard work.

We believe that enterprise should be rewarded and not penalised. We believe that we must adjust ourselves to changing situations. We believe in seizing economic opportunities and not let them go past us. Finally, we believe in self-reliance... These are human qualities that have helped to transform an island-swamp into a thriving metropolis. They are the traditional virtues of Singaporeans and so long as we retain these virtues, we can face the future with confidence¹.”

Dr Goh’s convictions remind us Singapore’s destiny depends on our ability to adapt and react to new challenges and opportunities. The story of this island nation is far from over. Becoming Singaporean has always been a matter of more, not less; addition, not subtraction; larger, not smaller – and may it always remain so. The “population issue” can spell new opportunities and new imaginings but it can also accentuate existing fault-lines and sharpen nascent differences. May this report make a modest contribution to weighing the scales in favour of the former possibility.

Janadas Devan
Director, Institute of Policy Studies
National University of Singapore

¹ Speech by Dr Goh Keng Swee (then Minister of Finance) at the swearing-in of the new committee of the Chinese Chamber of Commerce, 15 March 1969.



Executive Summary

EXECUTIVE SUMMARY

POPULATION OUTCOMES: SINGAPORE 2050 PROJECT

Singapore's Total Fertility Rate (TFR) has been below the replacement level of 2.1 births per woman for more than three decades, with an "ultra-low" level of less than 1.3 births per woman since 2003. The implications of such low TFRs and extended life expectancy are that the population will age and in time rapidly decline. This could in turn have important economic, social and political implications for the country.

Singapore's recent experiences with raising the TFR and increasing immigration have shown that whilst the former is difficult to achieve, the latter has also its drawbacks. Although these challenges are not unique to Singapore, the consequences of demographic change are likely more keenly felt here than elsewhere due to Singapore's small size and high-density urban environment. In addition, there are likely to be unique issues that Singapore needs to address due to its status as a city-state and the socio-political contexts associated with population policies.

In 2007, the Institute of Policy Studies (IPS) embarked on a project to generate scenarios of population size, growth rate and age structure for Singapore's resident population under various assumptions of fertility, mortality and migration trends over the period 2005–2050. The project was extended to the total population, including "non-resident" foreigners, in 2012. Projections of the labour force growth and sizes were also made.

IPS convened the Population Outcomes: Singapore 2050 (POS2050) project the same year to consider and analyse public policy issues arising from Singapore's demographic challenges through 2050, and offer possible solutions to address them. The project work was undertaken by six multi-disciplinary study groups comprising experts from academia and the public, private and people sectors. The groups deliberated on issues such as the economic and labour force implications of population and workforce ageing and decline; the demands on land and physical planning; additional social infrastructure and social capital development requirements; and further ways to raise the TFR. This report is the result of the study groups' eight-month discussion and work, which drew on their knowledge and expertise from their respective fields.

The objective of the POS2050 project was to (a) undertake a holistic, multi-disciplinary review of the economic, social and political implications of the



projected demographic scenarios for Singapore over the next 40 years, and (b) identify the policy options available to respond to demographic trends. The ultimate goal is to identify balanced and flexible policies that can ensure that Singapore's future generations will be able to live, work and play in a good environment, and in a sustainable manner.

CONCEPTUAL FRAMEWORK

The six study groups studied the population and labour force scenarios generated by IPS, discussed their implications and identified policy recommendations in the following substantive areas:

- Capital (i.e., economic impact, including public sector expenditure, savings and taxation)
- Labour (i.e., workforce, output and productivity)
- Land and physical infrastructure development
- Marriage and child-bearing
- Social infrastructure development
- Social capital and development

The terms of reference were first formulated by IPS, taking into account what was viewed as the most critical aspects of the demographic challenges in each respective area, and subsequently revised by six study groups upon further extensive discussions with consensus from IPS.

Each study group undertook their discussions independently, and in February 2013 the groups came together at a plenary session where key issues were deliberated amongst the members who were present. After the feedback from the plenary session, the groups then refined their arguments and produced their individual draft reports. The reports (see Chapters 2 to 7) were subsequently presented at a conference to an audience of relevant stakeholders in July 2013.

PROJECTIONS OF SINGAPORE'S POPULATION AND LABOUR FORCE

The six study groups were provided with IPS' population projections which showed (amongst other things) the ageing and shrinking of Singapore's resident population in the absence of in-migration and with sustained ultra-low fertility levels, rising old-age dependency ratios and declining proportions of working age persons in the resident and total population through 2050.

Scenarios 1 and 3 of IPS' population projections (which assume no in-migration and TFR either at an ultra-low level of 1.24 or rising to 1.85 by 2015) indicate that resident population sizes in 2050 would be lower than





that in 2010. Scenario 2 (with TFR of 1.24 and the annual net addition of 30,000 of citizens and Permanent Residents, or PRs) indicates that resident population would grow to 4.9 million in 2050. Further, by assuming three different levels of “non-resident” or foreign-to-resident ratios, Scenario 2 generated three total population projections for 2050 ranging from 6.1 million to 7.3 million.

The proportion of the resident population in the 15–64 age group declines from about 74% in 2010 to 57–63% in 2050 in Scenarios 1 to 3. In Scenarios 2A–C the proportion of the total population in this age group would fall less sharply from about 79% in 2010 to 69–73% in 2050.

Labour force projections show similar trajectories as that of total population. The resident labour force in Scenario 2 would rise from 2.076 million in 2010 to 2.424 million in 2050, whilst the total labour force would rise from 3.122 million in 2010 to a range of 3.452–4.402 million in Scenarios 2A–C. Non-resident foreigners would constitute 37–45% of the total labour force in 2050, up from 34% in 2010.



ISSUES FOR CONSIDERATION

The study groups were given the above population projections by IPS and asked to consider a number of inter-related issues in three areas:

Society and Family

- Will the changing demographics and generational mix create new dynamics for the family unit and divisions between young and old?
- While in-migration can offset the ageing and shrinking of the population to some extent, could it introduce social and economic tensions between foreigners and locals?

Economy

- Will Singapore's growth model need to be adjusted to ensure sustained economic growth and prosperity without inequity?
- How will the country's economic performance and resilience be affected by its immigration policies?

Quality of Life

- While the economy may be more vibrant with higher levels of in-migration, will the quality of life be affected by increased population density and consequent pressures on the country's infrastructure?

KEY FINDINGS FROM THE STUDY GROUPS

Capital Study Group

The Capital study group evaluated the overall economic impact of an ageing and shrinking resident population on public sector expenditures, the country's savings and national reserves, pension schemes and taxation. It made specific policy recommendations in five key areas: (1) retirement adequacy, (2) housing affordability, (3) health and long-term care financing, (4) use of net investment returns on national reserves and (5) use of progressive and efficient taxation programmes. In addition, the study group supported recommendations by the Labour and Social Capital and Development study groups (Chapters 2 and 6, respectively) on raising labour force participation rates, especially amongst women and the younger elderly.

In its analysis of the issues, the Capital study group noted that policymaking efforts had focused on mitigating the effects of an ageing and shrinking resident population. This emphasis underpins the approach towards replacement migration, or supplementing the resident labour force with



immigrants and foreign workers to make up for an expected shortfall in workers. The study group highlighted the need for adaptation and for policy and institutional changes to encourage people to behave in ways that will help the economy and society to adjust successfully to an ageing population.

In order to sustain economic vitality it was important for the labour market to remain flexible with labour laws that support the creation of productive employment for large cohorts of progressively more highly educated workers. Productivity-led growth is the only sustainable way of raising incomes per capita and offsetting rising costs in sectors where productivity gains have been difficult to achieve, e.g., labour-intensive industries such as health and eldercare, and personal services.

There is also a need for efficient intermediaries and institutions to mobilise the savings of workers to be channelled into productive investments with returns sufficient to provide financial adequacy for those workers in retirement. In this respect, the study group suggested adjusting policies to enable Singaporeans to “de-cumulate” and unlock the value of their housing assets, such as improving the monetisation options for retirees’ residential property.

Singapore’s social security system would need to strike an appropriate balance between individual savings, social insurance and direct subsidies financed by general taxation. For many lower-income households, the lack of retirement adequacy is often due to the fact that their wages are such that they are unable to accumulate sufficient savings for retirement over their working lives. Policies would therefore have to be crafted to balance the need to provide financial support for such households whilst creating incentives for those who can work to continue to do so for longer. The study group suggests a two-pronged approach that (1) tops up the Central Provident Fund (CPF) retirement accounts of the working “younger elderly” (aged 55–64) to make up for declining employers’ contributions as they get older and (2) retirement grants for those currently above 65 years who do not meet the CPF Minimum Sum.

Whilst recognising that the principle of self-reliance will remain fundamental to a sustainable social security system, the study group argues against the shifting of the rising costs and health risks of a rapidly ageing population to individuals, their families, employers or private insurance in the hope that the market will impose more cost discipline in the system. More of the additional fiscal load will have to be borne by the state, which possesses considerable fiscal reserves and has therefore considerable scope to support these increased outlays without having to rely primarily on raising taxes in the short or medium term. The study group recommends increasing



the share of the net investment returns on the national reserves that can be utilised to finance increased social expenditure, or more radically, setting aside a part of the reserves to cover the needs of the pioneer generation.

If the enlarged share of net investment returns from the reserves proves insufficient to cover increased social expenditure requirements in the future, the group proposes that it would be most equitable to raise taxes through progressive taxation structures (e.g., capital gains taxation and wealth taxes such as those on property) rather than to increase regressive consumption taxes. Capital gains taxes are also efficient in that they do not reduce work incentives.

Labour Study Group

The Labour study group reviewed the optimal level of immigration and foreign worker inflow that would balance productivity gains to achieve sustainable growth in national income per capita, in view of projected changes to Singapore's working age population and labour force set out in IPS' population projections. The group also considered the appropriate mix of skills required for development as a knowledge-based economy, and made recommendations for policies on the labour market and for small and medium enterprises (SMEs) to adapt to an increasingly volatile business and employment environment that is impacted by globalisation and significant technological change.

The group noted three factors that would affect Singapore's workers and their employers in the next four decades: (1) demographic changes leading to an ageing and shrinking of the resident population and labour force; (2) foreign workforce growth rates that would have to be reduced to levels significantly lower than those experienced in the past (or risk reaching total population levels that could threaten social well-being, cohesion and national identity) and (3) economic volatility and income inequality as a result of globalisation and technological changes. These factors could result in a higher rate of structural and cyclical unemployment, financial hardship for ageing, lower-wage workers and major adjustment difficulties for the country's small and medium enterprises (SMEs).

The size of the labour force is determined by the size of the working-age population and the proportion of that group seeking employment (the labour force participation rate). Singapore can therefore maintain the size of the labour force in the face of ageing of the population in a few ways: (1) raising the age of retirement; (2) increasing the TFR, which admittedly will have an effect only in the very long term; (3) increasing immigration and/or importing foreign labour and (4) increasing the labour force participation rate. The



group supports policies that encourage greater labour force participation (especially amongst women and the elderly) and recognises that policies such as the provision of higher quality and affordable childcare facilities could have complementary positive effects in boosting female labour force participation as well as potentially raising the TFR in the long term.

The use of immigration as a lever to offset potential shrinkage of the labour force and the intake of foreign labour have been major tools in managing the size of Singapore's labour force, but it was noted that these are associated with social, economic and political costs. A poorly controlled and sizeable intake of foreign labour could depress wages and productivity in certain industries, and lead to higher property prices, over-use and depletion of public goods and services and weakened social cohesion and national identity. Large-scale immigration and naturalisation could reduce the returns on education to the citizen population, thereby dampening investments in human capital and potentially lowering social mobility amongst the indigenous population.

The rate of foreign labour intake is currently demand-led, subject to taxes on foreign labour and prescribed ratios of local and foreigners hired. The Labour study group thus recommends the introduction of calibrated foreign labour and immigration policies such as annual quotas that are consistent with (1) the need to stimulate productivity in industries that have become over-reliant on ready access to relatively cheap foreign labour; (2) a shift away from labour-intensive industries to more capital-, skill- and technology-intensive activities and (3) the capacity of Singapore's physical and social infrastructure to absorb the growth in the population. Assuming productivity gains of 1.5–2.0% per annum can be sustained, the group proposes setting a target of labour force growth of 0.5-1.0% per annum through 2020 and 0.5% per annum thereafter.

In order to sharpen the focus on productivity, GDP per capita should be used as the primary economic performance indicator rather than GDP itself. GDP per capita growth provides a better representation of the improvement in the quality of life as well as income at the individual level.

A more productive and adaptable labour force is required to enable the shift to the skill- and technology-intensive activities that are undertaken in a knowledge-based economy. Singapore should therefore increase its investments in the education system and intensify efforts to promote lifelong learning. The Labour study group supports the recommendations on education by the Social Infrastructure Development study group on levelling up schools, deferring streaming to later ages and smaller class sizes.



The pace of technological change has increased the rate of skills and knowledge obsolescence, increasing the need for multiple, flexible educational pathways where learning is seamlessly interspersed with work and is substantially employer-led. A comprehensive Continuing Education and Training (CET) system (also recommended by the Social Infrastructure Development study group) could raise labour market flexibility and boost labour force participation amongst women.

As the employment market becomes more complex and uncertain with economic restructuring and volatility, structural unemployment may rise and cyclical unemployment could occur more frequently. The Labour study group proposes the introduction of a wage insurance and unemployment credit scheme to allow the unemployed to cover their basic expenditure whilst they retrain for a new job, thus enabling the labour market to become more flexible and preventing bouts of cyclical unemployment from becoming long-term and structural.

The SME sector is an integral part of the business eco-system in Singapore and in aggregate, the largest employer of workers. Economic volatility and requisite labour market changes as suggested above will have significant effects on SMEs in Singapore. Additional support may need to be provided to such businesses to help SMEs cope better with the rapid pace of economic restructuring, in particular in accessing aid provided by various government agencies, co-ordinating regulatory support and upgrading administrative, accounting and human resource capabilities. The study group proposes a new agency be established similar to the Economic Development Board (EDB) that focuses on providing co-ordinated assistance, aid and even multi-stage financing of SMEs.

Land and Physical Infrastructure Study Group

The Land and Physical Infrastructure study group ("Land study group") reviewed the impact of the different IPS demographic scenarios on land use and physical environment, and made recommendations on potential strategic responses in relation to land use, transport, green and open spaces, housing and related issues. The group considered the concept of carrying capacity¹ in the context of Singapore, not just as a city but also as a country, where the need for land goes beyond supporting conventional city functions such as housing, employment, mobility and recreation but also encompass reservoirs and water catchment areas, military training and defence

1. Usually defined as the maximum population of a given species that can be supported indefinitely in a defined habitat without permanently impairing the productivity of that habitat.



installations as well as large-scale infrastructure such as airports and seaports and a range of industries to diversify its economic base.

Since the 1960s, gross population density for the city-state has gradually increased, doubling from 3,000 persons per sq km to 7,257 persons per sq km in 2012. More significantly, net urban density (i.e., population in the built-up area) has also risen, from 9,000 persons per sq km in 1980, to around 12,400 persons per sq km today. This trend highlights a guarded attitude towards land consumption on the part of government planners in the face of a growing economy and population.

IPS' population projections imply a continued trend of higher population density, an ageing population and a large pool of migrant foreign workers who would require provision in terms of accommodation, transport, healthcare and other amenities. The various scenarios imply the necessity of planning for very diverse needs of the future population, for example, the aged living with their families (multi-generational households requiring large apartments); singles living by themselves (requiring separate housing provisions); elderly people downsizing to smaller apartments; and shared accommodation by migrant workers in dormitories. Higher living densities and potential unevenness in the density distribution would need to be addressed as this is often the main cause of residents' perception of overcrowding, congestion and negative experiences of urban stress and unhappiness.

The Land study group calls for integrated solutions for these issues that do not rely solely on physical planning. Since land as a resource is in largely fixed supply, Singapore would need to look for ways to achieve economic objectives that have lowest land requirements. Although Singapore's economy would likely become more service-oriented in the future (as indicated by the Labour study group), manufacturing would still be a crucial component of the economy. The manufacturing sector's land consumption patterns can and should be changed with advancement in technology. Concurrently, the economy must be developed increasingly through creative talents, innovative methods and a highly productive workforce, with a focus on high value-added industries with the most productive use of scarce land.

On the supply side, the group recommends a multi-pronged approach of expanding land capacity and selective intensification of land use in areas of very good accessibility (such as those near MRT stations and interchanges). Options to increase land capacity such as the use of some of Singapore's sea space of 680 sq km for large-scale storage and similar uses should be considered, whilst the proposed future relocation of the Tanjong Pagar, Keppel and Brani container terminals to Tuas (as well as the discontinuation



of use of the Paya Lebar airbase) would free up substantial land area which should be developed as intensively as possible to optimise current infrastructure, complement downtown commercial and residential developments, and lift the development pressure from the rest of the island. Underground space should also be used where feasible to free up surface land, with land uses such as factories, warehouses, roads and other infrastructure moved underground as and when cost and other constraints can be overcome.

The Land study group calls for the adoption of design and urban planning principles that promote civic qualities and community integration, where high density is designed as a function of enhancing social integration. Education and community facilities are possible integrative elements, with the idea of inserting educational facilities as the “central nervous system” of towns that link the community network. This new urban form must be supported by a new local economy, centred on learning and other community functions. This idea is echoed in the Social Infrastructure Development study group’s concept of “schools-in-community” and the “community-in-school”. Multi-use, integrated facilities that are elder-friendly should also be designed to promote ageing in place, and public amenities should not be age-differentiated to allow for greater social interaction and the development of a sense of community.

Future land use plans will need to incorporate the potential housing needs for Singapore’s transient population. The study group proposes housing supply be planned and allocated in a manner that is calibrated to the projected stock of non-permanent foreign workers and their need for social and economic integration. In this there may have to be co-ordination between the ministries and agencies in charge of foreign labour intake (e.g., Ministry of Manpower and Ministry of Trade and Industry) with those with responsibility for land use and allocation.

The Land study group recommends that planning for transport be better integrated with other land uses such as schools, hospitals and employment places, with the concept of “decentralised concentration” proposed as a means to improve the distribution of dense urban nodes and compactness across the island. It would promote better accessibility and less need for travel. The study group supports a multi-modal response to encourage private car users to switch to public transport, with the promotion of public transport such as buses and trains as well as non-motorised modes such as cycling and walking for shorter trips and leisure.

As Singapore’s population and economy grows, there will be greater pressure to draw upon land that is currently not developed. The study group



believes Singaporeans have a deep desire for keeping greenery and are supportive of strong measures to protect nature reserves, parks, open spaces and heritage areas. Greater citizen consultation on issues of the conservation of heritage and green spaces would be needed, with the use of environmental impact assessments potentially providing a common ground for public engagement in the policymaking process.

The Land study group also recommends that green spaces become more multi-functional, such as integrating educational facilities and community uses. Better use of resources should be made, such as the now disused railway corridor which presents opportunities for recreational, educational, community and a host of other co-located functions.

Marriage and Child-bearing Study Group

The Marriage and Child-bearing study group considered the impact of existing incentives and policies to encourage marriage and child-birth, and other direct and indirect ways to raise the TFR. The study group reviewed the trends in the factors influencing marriage and family formation, marital fertility and child-bearing with the objective of making policy recommendations that may improve Singapore's ultra-low fertility levels.

The study group was of the opinion that the current measures laid out in the enhanced Marriage and Parenthood Package announced in 2013, while certainly helpful, did not completely address many of the underlying concerns that may have an effect on future fertility. There should therefore be a shift in the policy emphasis to understanding and resolving underlying root causes, rather than focusing narrowly on the TFR with targeted policy measures. The study group recognises that these factors did not work in a simple causal relationship, but rather that they work together to shape perceptions that starting a family in Singapore is a highly burdensome activity considering the many obligations that it imposes, and the lack of easily available resources to make this task easier.

A narrow definition of success in Singapore conceptualised by excellent performance in academic and job achievements ignores many other equally important areas of success that individuals can experience. This in turn increases the pressures arising from a highly competitive education system that has an emphasis on performance measurement and high-stakes examinations early on in a child's life. Parents, in their pursuit to ensure good outcomes for their children, are pressured to commit substantial financial and time investments, failing which they fear that their children would not be adequately prepared for the rigours of competitive examinations and streaming systems. It is well known that much of the preoccupation in



families with school-going children revolves around their children's academic attainment, leaving substantially less time to experience the joys of family life. To counter this, the Marriage and Child-bearing study group recommends a review of educational policies to ensure that the demands of school work and examinations are not overwhelming, and that parents do not feel that additional pressure on their children will be necessary for their future success. The group also suggests increased support for public education by civil society organisations to curb unrealistic and unnecessary aspirations that people have about parenthood and marriage.

The study group noted the current emphasis placed on the individual's early career phase in determining subsequent career potential. Workers who excel in the first few years of work are often fast-tracked and earmarked for more senior positions. Such selection schemes mean that there is little chance for those who are not high performers early in their careers to subsequently gain access to more desirable career options. This human resource practice has the effect of deferring marriage plans among young adults in order to concentrate on achieving career success.

Related to this is the lack of a family-friendly work culture in many business settings. This is apparent considering the difficulty Singaporeans seem to have in asking their employers for flexi-time arrangements; the general concern about taking time off to attend to their children's concerns or care for various exigencies in their families could be felt as signalling a lack of commitment to the job. The study group was strongly of the view that the state has a significant role in regulating businesses and ensuring work-life balance. Recommendations on this issue include legislating that businesses provide a well-considered response to their staff's request for flexible work arrangements and incentivising companies that report greater use of work-life balance measures. Legislating the right for workers to ask for flexible arrangements may normalise such requests rather than the current situation where workers are concerned that such requests may be viewed negatively by management and colleagues.

The study group also recommends the establishment of greater incentives for companies that are able to obtain good outcomes through their implementation of work-life balance practices. The study group proposes legislation of employers to ensure that flexible time arrangements are appropriately considered and, where there is a lack of expertise in terms of the feasibility, suitable consultants are sought to help with the introduction of such arrangements. The group also suggests the introduction of schemes for women who leave work for childcare reasons to re-enter into employment without losing the value of their prior work experience.



High costs of living and child-rearing were found to be important factors in the decision-making process to marry and have children. With dual-incomes increasingly necessary to cover the basic expenses of the median household, broad-based provision of affordable childcare becomes a necessity. The study group therefore recommends the provision of universal (or at the very least well-subsidised) basic childcare and eldercare services to relieve the burden on families in a high-cost environment. They also suggest regular monitoring of the cost of raising children and its affordability for average Singaporeans, and for the results to be released regularly for public education purposes.

Social Infrastructure Development Study Group

The Social Infrastructure Development study group (“SID study group”) was tasked with reviewing Singapore’s public-private-people hybrid of social infrastructure systems in view of the demographic challenges of rapid population ageing and decline as set out in IPS’ population projections. The group set themselves the goals of efficiency, equity, quality and sustainability in evaluating the policies necessary to attain the optimum balance in providing, financing and regulating healthcare, social and community services, and education.

In addition to projecting the social infrastructure needs of the population by demographic distribution, the group also makes recommendations for the reduction of social inequality and the fostering of social cohesion, given its view that these factors are necessary pre-conditions of a sustainable society.

Social and community services

The guiding principles (self-reliance and “many helping hands”) underpinning the way in which Singapore provides welfare were reviewed. These principles have been emphasised by the government so that individuals will rely on themselves and their families as the first lines of support. The principles also apply to voluntary welfare organisations (VWOs), where they are seldom fully funded by the government. Like the Labour study group, the SID study group pointed out that these principles would have to be reconsidered in the light of significant challenges such as economic volatility due to globalisation and technological change. This is because self-reliance depends on the availability of jobs and earnings whilst the MHH principle requires a robust and comprehensive community network with the appropriate support and co-ordination of which the state is best positioned to provide.

The self-reliance principle should therefore be redefined from one that emphasises temporary and minimum help, to one that emphasises holistic



assistance to enable beneficiaries to gain a foothold towards self-reliance. Whilst the MHH principle is aligned with the study group's concept of the "individual-in-community"², it could be applied more effectively with holistic and integrated interventions that replace the (current) requirement that an individual apply separately for aid from different programmes, with a shift towards a full funding partnership between the government and VWOs in which trust and improved data-sharing become the foundation of the funding and regulatory environment.

The group's vision of an individual-in-community concept with strong social cohesion will require concerted efforts towards building that community. The study group sees much potential in a locality approach in healthcare, education and social care, through a single centre that provides the different programmes that needy families often need in tandem. Having the different social infrastructural development in a local centre where different activities are integrated within the centre can foster greater synergies in person-centred social development.

Integral to this development would be a whole-of-government commitment to a consolidation of the responsibilities of different ministries and agencies, and require multi-disciplinary teams of social workers, community workers, career consultants and community health workers to deliver appropriate holistic solutions. The manpower and skill shortages in the sector would have to be addressed, perhaps by improving the status, remuneration and recognition of such workers.

Education

The study group recognises the central role of the education system in the strategies and policies needed to deal with Singapore's demographic challenges through 2050. The analyses and recommendations made by the other POS2050 study groups related to the education system (namely, the Labour, Marriage and Child-bearing and Social Capital and Development study groups) were taken on board and are reflected in the SID study group's recommendations.

The ideologies of marketisation and meritocracy have put efficiency as the key aim of Singapore's education system — efficiency in terms of reducing wastage of school drop-outs, wastage of talent not being groomed to their

2. The defining characteristics of the "individual-in-community" concept are the prioritising of social besides economic goals (as opposed to the "individual-in-economy"), and recognising that the individual is an intimate part of a community, and it is important therefore not to develop just individuals, but also to develop communities.



best potential, wastage of non-competitive schools not striving to improve student performance, and wastage of not sorting students into specific tracks to suit their aptitudes.

The study group notes the growing concern that instead of promoting the levelling up of schools and students, a highly differentiated and competitive system may actually lead to greater inequality and lower social mobility. Three reasons for these unintended effects are: (1) labelling and stigmatising of different groups (gifted/normal, Express/Normal, etc.) resulting in people behaving and performing to their assigned labels; (2) self-reinforcing effects arising from the more prestigious schools attracting more resources and better students, whilst less prestigious schools suffer the opposite, which then accentuates and entrenches inequality and (3) the different groupings and networks that result from the active streaming and sorting become instrumental in defining the current and future success (or otherwise) of the various groups.

The study group's recommendations for the education system are focused on increasing priority on education's role in fostering social cohesion, reducing inequality, raising social mobility and improving (both qualitatively and quantitatively) the country's labour force participation rate.

In particular, the group recommends a shift away from differentiated, ability-segregated pathways especially at the early, foundational stages of education towards more individually tailored classrooms with smaller class sizes. Streaming should be postponed to age 16, when students are in a better position to make significant life choices to enter junior colleges, polytechnics or institutes of technical education. The "every school a good school" commitment should be backed by efforts to channel more teaching and physical resources to the schools assessed as the weakest to help them level up. Within each school, remedial help should be prioritised towards the weakest students with the support of allied educators, teacher assistants and even peer teachers.

The group also proposes the development of a "school-in-community" principle where schools become engaged partners of their local neighbourhoods. This sees the school being involved in various community activities, whilst the "community-in-school" relationship is about the community being involved in the school, by sharing some school facilities with the community (e.g., shared sports facilities or having co-located community care services), and community participation in student learning in a real-world context.



The need for the education and training of scarce manpower in key social sectors is clear and the study group recommends significant government intervention and leadership in increasing the numbers and improving the quality of manpower in these sectors. Additional flexibility should be introduced in post-secondary educational pathways to facilitate mid-career switches, with Singapore's CET system enhanced further through greater integration with the employment market.

Healthcare

A robust healthcare system is widely accepted as an integral part of a sustainable economy and society. Better health increases a community's capacity to work, translating into higher productivity, which in turn leads to higher incomes. Good lifetime health can extend labour force participation and sustain the vitality of the workforce despite ageing trends. In the reverse direction, a well-performing economy also enables higher healthcare spending and therefore better health.

Singapore's public healthcare system is widely considered as well designed and financially sustainable. Nevertheless, it will face a number of significant challenges in the years to 2050, but especially so in the next 10 to 15 years. Firstly, the ageing of the population will likely require increased national expenditure on healthcare. The second challenge is healthcare price inflation, which has outpaced general price increases. Rising expectations for better care coupled with advances in medical technology raise the bar on what society considers as basic levels of healthcare, in turn putting upward pressure on costs. There are risks of supply-induced demand in addition to the reality that productivity gains are difficult to achieve in this sector. Third, current imbalances in the public-private-people mix of provision, financing and regulation as well as in the dominance of acute-care in the continuum of health services will increasingly strain the system and worsen distributional issues.

Singapore's current acute care-centric healthcare model also leads to the under- provision (and arguably more *ad hoc* provision) of preventive care such as health screenings, public education and promotion of healthy living, whilst mental healthcare becomes under-developed.

The SID study group's recommendations for the health and long-term care sector are in three broad areas: (1) strengthening the commitment to universal healthcare, (2) focusing healthcare on the well-being of patients and (3) developing resources to support a person-centric universal healthcare system.



On strengthening the commitment to universal healthcare by improving access and affordability, the group proposes that the government clearly define the universal healthcare commitment with regular reviews and updates. It should also support the introduction of basic and comprehensive universal social health insurance³ with greater integration between health and long-term care coverage, inflation-indexation of means-tested thresholds and the introduction of co-payment caps especially for cost-effective preventive health interventions.

A person-centric health system should be developed with the establishment of an outcomes-based regulatory framework (developed in tandem with the national health and social services databases), which is agnostic about the means of achieving health and balance healthcare provision towards more preventive and primary care. The study group suggests a shift in the value orientation of healthcare from professional-centric (mainly specialist doctors) to patient-centric, from remedial-focused to preventive and primary care-focused, and from institution-based to community-based. Such a re-orientation requires the devolution of power and responsibility from doctors to other health-related professionals such as nurses, social workers and community workers, and also to volunteer citizens, and is consistent with a more cost-effective and community-conscious delivery model. Steps should be taken to continue enhancing the portability and eligibility of the subsidies and services available under the Community Health Assist Scheme (CHAS). The study group proposes the adoption of a localised community health model where health and long-term care services are co-located with other community services (a health clinic and a community library within a school, for example). Such a model is consistent with the proposal by the Land study group for the insertion of a “central nervous system” at the heart of a community network in township.

As with the other social infrastructure sectors, acute manpower shortages will need to be addressed, with extra efforts suggested by the study group to train para-professionals in core competencies such as ethics, cross-cultural work, integrated care and work with the elderly.

3. As is being proposed under the MediShield Life scheme as announced in the Prime Minister's National Day Rally speech on 18 August 2013.



Social Capital and Development Study Group

The Social Capital and Development study group considered the core concept of social capital, along with its applications and relevance for the Singapore population scenarios and contexts, and discussed key issues pertaining to social capital.

Like traditional economic capital, social capital can be drawn upon as a resource to provide the means to achieve intended goals. A consideration of social capital in the policymaking process is necessary because of its influence in matters such as collective action, problem-solving and social resilience to threats and crises. Social capital is critical to Singapore, given that it is a young and small country with a heterogeneous population made up of different races and religions. The development of social capital has become particularly relevant to Singapore as it is now confronted with various population scenarios associated with multiple demographic changes related to increases in population size and diversity.

The Social Capital and Development study group makes specific policy recommendations in five key areas: (1) developing family and intergenerational relations, (2) building social identification within Singapore, (3) addressing social divides, (4) enhancing social cohesion and national identity and (5) strengthening National Service (NS) and service to the nation.

As the family is an important site of social capital, and one that is likely to be significantly affected by Singapore's changing demography, the study group proposes a comprehensive review of policies in various life domains that recognise the needs of diverse groups of Singaporeans (e.g., housing, work leave and financial incentives that are currently dependent on marital or parenthood status). In view of the larger numbers of transnational marriages in Singapore, more empirical studies are needed to develop evidence-based approaches to facilitate these marriages to become sites of positive rather than negative social capital.

The study group supports the Social Infrastructure Development study group's concept of "in-community", localised provision of community services, and the Land study group's proposed "central nervous system" as the focus of township development. Given the multitude of social capital implications in urban design, the group proposes that the government explicitly incorporate social and behavioural sciences in land use and infrastructure planning, so that the resulting physical environment will positively influence social interactions and behaviours and not create unintended negative social consequences.



The study group also proposes the government evaluate alternative care arrangements for the elderly and introduce new arrangements to complement existing ones. For example, the government may consider authorising the formation of a quasi-family unit where elderly Singaporeans are allowed to live together in the same housing unit and care for each other with legally binding rights and responsibilities.

The restructuring of the former Ministry of Community, Youth and Sports into the Ministry of Social and Family Development (MSF) and the Ministry of Culture, Community and Youth (MCCY) in November 2012 was undertaken to bring a sharper focus on the government's work in the development of families and social services. The study group believes that a "whole-of-government" approach to social capital development will go beyond the technical co-ordination across agencies to enhance policy integration involving these ministries as well as other relevant ministries such as the Ministry of Health (on matters such as active ageing and intergenerational relations). The "whole-of-government" approach may also be necessary to address social mobility in a more holistic and effective way, and the study group suggests the establishment of a national secretariat (under the Prime Minister's Office) to lead and co-ordinate strategic directions for research and policy related to social mobility.

To enhance local-foreigner integration, efforts should be made to promote foreigners' understanding of Singapore's important laws, values, norms and cultures. The study group proposes a wide spectrum of Singapore citizens be engaged to conduct both mandatory and voluntary programmes for foreigners on different critical aspects of Singapore, with these integration programmes conducted early and well before the foreigners are granted PR status or citizenship. The government should work with the various stakeholders (e.g., employers, religious groups and ethnic-based self-help groups) to systematically engage non-PR foreigners to increase their sensitivity to local norms and values, with particular focus on promoting harmonious relations across different nationalities, races and religious groups in Singapore.

Effective communication and crisis management of conflicts are critical for integration. The study group proposes that the government work with relevant stakeholders in the public, private and people sectors, including the online community, to develop effective communication channels and crisis management plans that can deal with situations involving issues of local-foreigner relations and racial or religious harmony.

Having sufficient value-added jobs for Singaporeans is important for economic productivity, but it also contributes to social capital by reducing



negative outcomes from citizen unemployment and underemployment as well as citizen perceptions of disparity and inequity from upward comparison with foreigners. The development of a Singaporean core at all levels across the major sectors of the economy is critical for security, economic and social resilience by avoiding over-reliance on foreign workers. The study group therefore proposes the government give top priority to the two goals of creating value-added jobs for Singaporeans and developing a Singaporean core at both worker and leadership levels. The Tripartite Alliance for Fair Employment Practices (TAFEP) should be given more resources and authority, including legal powers if needed, to extend its role of promoting fairness at work. The government should invest more to improve the work conditions and career prospects of community-based professions, so as to attract more Singaporeans to take on these jobs (a similar recommendation is made by the Social Infrastructure Development study group).

The selection of foreigners for granting PR status and citizenship needs to go beyond economic criteria, to explicitly consider the applicant's integration potential, which includes the applicant's knowledge and respect for the major laws, values, norms and cultural practices in Singapore and the foreigner's non-economic contributions to building social capital in Singapore. The government should therefore develop multiple valid indicators of integration potential to complement the existing criteria for selecting foreigners for granting PR status and citizenship.

There is a need to discuss national values within the context of building social capital, with a practical set of shared values that Singaporeans can agree on and likely to contribute to social capital through sense making, amicable resolution of disputes, constructive collective action, and development of trust and reciprocity norms. The study group recommends a review of Singapore's shared values that involves a wide spectrum of Singaporeans be undertaken.

Citizen well-being is multi-dimensional and a large part of it consists of social well-being that goes beyond meeting material needs and wants. A comprehensive framework of multiple indicators should be developed to assess and track over time various aspects of social capital and social well-being for the different segments of the population. These indicators will also help inform government and citizens as they evaluate policy effectiveness with regard to policy intent, discuss policy alternatives, and make decisions in trade-off situations.

NS is a powerful site for building social capital and developing citizen commitment to the nation. The study group proposes a taskforce be set up (that could work with the Committee to Strengthen National Service) to



consider a number of initiatives and policy measures to strengthen NS and service to the nation, including the possible establishment of a form of “NS-in-the-community” that could be extended to female citizens and PRs. This would permit female citizens and PRs (and naturalised citizens) to participate in the social capital and nation-building opportunities from which they are currently deprived as they are currently excluded from the NS obligation. The NS and “NS-in-the-community” could be used as a strong indicator of commitment when reviewing applications for PR or citizenship, with PR renewals for whole families made contingent upon fulfilling the NS obligation. The taskforce should also consider instituting a holistic recognition mechanism for those who have served NS that incorporates not just monetary rewards but also those that are less explicitly tied to money (subsidised healthcare, access to facilities, public housing priority) or are non-monetary in nature (opportunities for training, career development). The taskforce should also consider if it is possible to shorten the duration of NS by increasing the efficiency and effectiveness of training in NS and the quality of the NS experience.

Social capital is critical to Singapore’s survival and progress, given the unique features of the country relating to its people, government and environment. It is multi-dimensional and dynamic, and hence a “whole-of-society” effort is necessary to ensure it develops positively rather than negatively. Singapore’s population challenges have added to the complexity, consequences and criticality of social capital and its development. Organic development of social capital will occur, but it will be policy decisions and actions, particularly those in response to the population challenges facing us, that will influence the direction in which social capital proceeds.



STUDY GROUP RECOMMENDATIONS

CROSS-CUTTING RECOMMENDATIONS

The recommendations of each POS2050 study group were made independently, albeit with the benefit of the feedback arising from the joint plenary session held in February 2013. However, it quickly became clear to the IPS Secretariat that there are several cross-cutting themes and policy recommendations, with similar points of view and prescriptions that were independently formulated by several groups and from their various specialist perspectives.

The cross-cutting themes and policy recommendations include:

- 1) Developing a “whole-of-government” approach to addressing the complex and multi-dimensional challenges posed by Singapore’s demographic trajectory.
- 2) Embedding and locating services, functions and institutions in the community, and engaging the community in those functions and institutions to enable a “whole-of-society” setting in addressing Singapore’s demographic challenges.
- 3) Reviewing the state’s role in the provision of welfare.
- 4) Placing further importance on health and healthy living.
- 5) Reviewing the education system to adapt learning pathways that meet the needs of a globalised, knowledge-based economy.
- 6) Re-thinking the concept of ageing and considering the elderly as assets rather than liabilities.
- 7) Developing person- and citizen-centricity in all aspects of policymaking.
- 8) Championing the importance of data and data-sharing.

CAPITAL STUDY GROUP

- 1) Introduce more monetisation options for the majority of older Singaporeans who own public housing.
- 2) Develop a sizeable pool of rental housing options for a population to shift from the accumulation of housing assets to consumption.
- 3) For the younger elderly aged 55–64, the government could make up for the reduction in employers’ CPF contributions. This could be complemented by some of the reforms recommended by the Labour study group, including wage insurance, unemployment credit and lifelong learning initiatives.
- 4) For Singaporeans above 65 who do not meet the CPF Minimum Sum, establish a retirement grant that will enable these elderly Singaporeans to participate in CPF LIFE.



- 5) Public housing policies to avoid conflating the goal of home ownership with that of asset appreciation; to instead emphasise housing affordability and price stability.
- 6) To ensure affordability, the government could consider keeping the price of new HDB Build-To-Order flats at or below three times the target group's annual income.
- 7) Avoid shifting the financial burden of health and long-term care to individuals or the private sector.
- 8) Enhancing the social safety net and redistribute the gains from productivity growth to ensure equitable access to good healthcare.
- 9) Increase the share of investment returns on national reserves that can be used by the government for increased social expenditures — or more radically, setting aside part of the reserves for specific disadvantaged segments of the elderly population. Consideration for such reserves need to be made before tax increases.
- 10) Review the use of national reserves in the context of the ageing population and rising number of elderly who lack both familial and financial support.
- 11) Provide relevant and up-to-date information on national reserves and their expected future contributions to the national budget, to enable more informed debates about Singapore's fiscal position and whether increased social expenditures must be financed with higher taxation.
- 12) Raise progressive tax (i.e., capital gains and property taxes), not regressive taxes (i.e., consumption tax) in the event that higher taxes are needed to finance greater social expenditures.

LABOUR STUDY GROUP

- 1) Set per capita GDP as the broadest key performance indicator, rather than overall GDP, as productivity underpins long-run real wages and resources per citizen.
- 2) Target labour force growth of 0.5–1.0 per cent per annum through 2020 and by 0.5 per cent per annum thereafter. Reduce reliance on naturalisation and immigration, which could result in social and economic costs. Take into consideration population limits of around 6 million by 2030 and 6.5 million by 2050 and beyond (as per IPS Population Scenarios 2A).
- 3) Set annual naturalisation, immigration and foreign labour quotas that are clear, publicly auditable and consistent with desired rates of labour force growth and terminal population limits.
- 4) When importing labour, rely more on Employment Pass or S Pass holders and less on Permanent Residents (the dependents of whom compete with citizens for subsidised resources). A shift towards single-



person immigrants — even at higher skill levels currently associated with employment pass or permanent residents, to reduce dependent inflows and to give more long-term promotion opportunities to experienced locals, should be considered.

- 5) Widen efforts to offset the decline in the labour force by boosting female and elderly labour participation rates, especially by raising retirement ages.
- 6) Increase spending on education, increase teacher-pupil ratio and focus the education system on developing a median student who can better perform in the creative, open-ended problem-solving work environment that characterises the knowledge-based economy.
- 7) Involve employers in the development of school curricula, thus allowing a demand-led approach to human capital formation.
- 8) Promote more comprehensively lifelong learning and continuing education and training as well as career transitioning to boost the adaptability and flexibility of the labour force as well as the productivity of older workers.
- 9) Develop an efficient and effective unemployment insurance system, e.g., wage insurance and employment credit, to reduce job uncertainty and employment market friction.
- 10) Raise the Workfare Income Supplement markedly to enable the working poor to earn a living wage for their families until labour productivity enables companies to pay higher wages without losing competitiveness.
- 11) Ensure minimum retirement adequacy by considering measures like a positive real interest rate on CPF savings and a means-tested retirement grant for low-income workers.
- 12) Reconsider affordability and the social policy framework in public housing and healthcare (especially long-term and chronic care), and commit to broaden social investments to help prevent a bulge in the ranks of the vulnerable as the population ages and as economic change quickens.
- 13) Help domestic Small and Medium-sized Enterprises (SMEs) adapt to labour scarcity and the new economy; a new agency with the authority, resources and focus of EDB could be created to simplify and consolidate aid and support to the SMEs' adjustment, competitiveness and long-term industrial capability.

LAND STUDY GROUP

- 1) Review the manufacturing sector's land consumption patterns and adapt land allocation in line with technological advances, with the emphasis on the highest value-added industries with the most efficient physical and environmental footprint.





- 2) Consider the redevelopment of golf courses into potential alternative uses such as low-rise commercial or residential developments, or other industrial uses such as clean storage.
- 3) Plan for green spaces to become more multi-functional, such as integrating with educational facilities and community uses. Improve the use of resources such as the railway corridor for recreational, educational, community and other co-located functions.
- 4) Develop the southern corridor as intensively as possible in tandem with the proposed relocation of the Tanjong Pagar, Keppel and Brani container terminals to Tuas, to optimise the existing infrastructure; complement the downtown commercial and residential development; and lift the developmental pressure from the rest of the island.
- 5) Review the operations of the present RSAF airbases in Singapore and consolidate the operations to enable the land currently allocated to the airbase to be freed up for other uses, and also to remove development height restrictions in the flight path over the surrounding areas.
- 6) Utilise underground space — where cost and other constraints can be overcome — for factories, warehouses, roads and other infrastructure such as water storage facilities.
- 7) Undertake further studies of floating offshore developments for potential land uses such as large-scale storage and other uses that require less permanent infrastructure.
- 8) Review the distribution of net density across the whole island, and ensure an even spread of net density (especially within new towns). Only areas with very good accessibility, such as those near MRT stations should be built to exceptionally high densities.
- 9) Encourage good design that promotes civic qualities and community integration, where high density is an element of social integration, with educational and community facilities being integrating elements in a central nervous system of the town. In this concept, all towns are thus considered “school towns”, which are hooked into the community. This recommendation ties in well with the school-in-community and community-in-school recommendation proposed by the Social Infrastructure Development Study Group.
- 10) Provide flexibility and modularity in reconfiguring HDB apartments into smaller units for smaller households, particularly for the elderly. The HDB should consider reintroducing Multi-Generation Flats and Granny Flats to promote ageing-in-place.
- 11) Explore new planning and design models of new towns to ensure they are elderly-friendly, with essential services and amenities in close proximity to support residents’ daily needs, and planned on principles of accessibility and convenience. Public amenities should not be age-differentiated to allow for greater social interaction and the development of a sense of community.



- 12) Plan adequately for the supply of housing for the transient population. The population projections indicate a high proportion of foreign workers (of various categories) into the future, and the demand for housing from this group will need to be an integral part of the urban planning process. The distribution and the impact of this transient population on Singapore's physical infrastructure must be carefully considered as part of the planning process.
- 13) Employ a holistic planning approach for transportation infrastructure development together with other land uses such as schools, hospitals and employment places. A concept of "decentralised concentration" is proposed as a model to better distribute dense urban nodes across the island.
- 14) Generate multi-modal programmes to entice private car users to switch to public transport.
- 15) Develop the concept of liveable streets where the co-existence of traffic and pedestrians is seen as a norm rather than a conflict. Selectively decreasing traffic speeds in these and other local areas would improve their environments and promote walking.
- 16) Provide more real-time information on traffic conditions and thereby influence travel patterns during peak hours.
- 17) Support schemes for tele-working or flexi-working to reduce peak hour congestion, and provide incentives for off-peak commuting and car-pooling.
- 18) Consider greater land use-transport integration and flexible work arrangements rather than simply building more physical infrastructure, given Singapore's land constraints.
- 19) Provide effective and long-lasting legal protection of Singapore's nature reserves, parks, open spaces and heritage areas.
- 20) Institute environmental impact assessments to empower the decision-making process in planning for nature areas, as well as to provide a common ground for public engagement in the policy-making process.

MARRIAGE AND CHILD-BEARING STUDY GROUP

- 1) Review educational policies to ensure that the demands of school work and examinations are not overbearing; that parents do not feel that additional pressure on their children will be necessary for their future success.
- 2) Provide sufficient reassurance that there is sufficient support and infrastructure for children who can meet the demands of university education.
- 3) Introduce legislation to ensure that flexi-time arrangements are appropriately considered by employers, and where there is a lack of



- expertise in terms of the feasibility of this, hire suitable consultants to provide recommendations for such possibilities.
- 4) Provide incentives for companies that are able to obtain good outcomes through their implementation of work-life harmony practices.
 - 5) Create schemes for women who exit work for childcare reasons, to re-enter into employment without losing the value of their prior work experience.
 - 6) Fund or encourage collaboration between businesses and other entities to organise events to allow greater mingling among singles to form possible relationships.
 - 7) Develop universal access or well subsidised basic childcare services, which are in line with a curriculum shift and does not emphasise academic achievement prior to formal learning.
 - 8) Develop universal access or subsidised elder care facilities.
 - 9) Increased support for public education by civil society organisations to curb unrealistic and unnecessary aspirations that people have about parenthood and marriage.
 - 10) Regularly monitor the cost of raising children and its affordability for average Singaporeans and release the results for public education purposes.
 - 11) Discuss broadly within and outside of government the place of parenthood outside marriage, especially in view of the likelihood of breakthroughs in artificial reproductive technology.

SOCIAL INFRASTRUCTURE DEVELOPMENT (SID) STUDY GROUP

Social Infrastructure Development: Cross-cutting Recommendations

- 1) Establish localised one-stop centres that are not just community-based but are in-community, where healthcare, financial assistance, employment assistance and other social services are delivered. The services in this delivery model must be dynamic, flexible and multi-disciplinary, requiring skilled workers conversant with community-centred work and community development with a diverse population across different disciplines.
- 2) Expand significantly the supply of SID manpower, in part by improving the remuneration and status of SID workers, including allied healthcare professionals, allied educators and social services workers/counsellors.
- 3) Ensure rigorous training for all SID personnel in four core competencies: ethics, cross-cultural work, integrated care and work with the elderly.



- 4) Disperse power and control from the centre to front-line staff, volunteers and to the community, so that this community-centric social infrastructure can be used to co-create personal and community development, recovery and progress.
- 5) Share aggregate data more broadly amongst government bodies, practitioners and researchers for use in trends projection, service planning and programme evaluation.
- 6) Consider establishing an umbrella ministry having oversight of the social and community-related care responsibilities currently handled by separate ministries (health, manpower, community and family).
- 7) Embed the levelling-up concept across all of the areas of SID, for example by the commitment of resources to level up the weakest students and the weakest schools, or with a strong and clear commitment to universal basic healthcare with social insurance.
- 8) Apply the concept of “many helping hands” more broadly, for example by providing financing on less prescriptive bases.

Social and Community Services Recommendations

- 9) Re-define the concept of self-reliance from one that focuses on temporary and minimum help to one that emphasises holistic assistance, to enable beneficiaries to gain a foothold towards self-reliance.
- 10) Loosen control of the regulatory and funding framework by reducing the specificity of funding uses and reporting requirements.
- 11) Review the reporting requirements and resourcing levels provided to support agencies in fulfilling these reporting requirements. Resources need to be provided to agencies to help with administration and provide technical support, and to release case workers for client work.
- 12) Establish a professional body, such as a social and community services council, to provide ground-up leadership and standards.
- 13) Adopt a locality approach to health, education and social care, with a single centre established in-community that delivers the various programmes that needy individuals and families often require in tandem — including finances, employment, training, housing, preventive and long-term care, and family counselling.
- 14) Expand the job scopes of case and community workers beyond narrow confines; these should be expected to be “messy” and to cross boundaries.



Education System Recommendations

- 15) Review the introduction of additional and differentiated pathways at the primary and lower secondary school levels and of specialised schools.
- 16) Introduce classrooms with smaller class sizes and comprising mixed types of students, with teachers working together in each class to tailor the teaching to each student's learning needs.
- 17) Consider the postponement of streaming to age 16, when students choose either Junior College, Polytechnic or an Institute of Technical Education. The Primary School Leaving Examination (PSLE) can be retained only as an assessment that students have attained the competencies required of a 12-year-old to progress to secondary school.
- 18) Broaden the spectrum of core competencies taught in primary schools, instead of having a largely academic focus that is promoted by the current system's emphasis on the PSLE.
- 19) Make "every school a good school" by channelling more resources assessed to be the weakest, for example by providing the best teachers and support services to disadvantaged schools to help them level up.
- 20) Within each school and classroom, remedial help should be prioritised towards the weakest students with the support of allied educators, teacher assistants and even peer teachers.
- 21) Put in place regulations governing the differences in facilities and resources between schools.
- 22) Develop the school-in-community and community-in-school concepts where the relationship is bi-directional. The composition of school boards can be expanded to include not only political leaders and alumni members, but also members of the community where the school is located, to boost the integration of the community in the school and vice versa.
- 23) Re-design the regulatory and management framework of schools, principals and teachers to one that encompasses broad developmental goals, with more rewards for gains in building character, helping weaker students and fostering co-operation rather than academic attainment. Develop an accountability structure that relies less on market principles, and based more on collaboration and mutual trust between the Ministry of Education and the schools.
- 24) Elevate the remuneration and status of allied educators and school counsellors, where more administrative support should be provided so that teachers can focus on teaching.
- 25) Review the expansion of tertiary education to increase access for students of poorer families, and in ways that do not create different elite and stigmatised paths.



- 26) Match the rate of expansion of tertiary education with the actual demand for degree holders from employers.
- 27) Reverse the trend of the hollowing out of vocational occupations (e.g., electricians, plumbers, carpenters, and others) by continuing to invest in technical education. Raise the professional image and standards in sectors such as social work, counselling and nursing, as these professions provide vital services to the public; require government intervention to educate the public on the value of these jobs; and set remuneration benchmarks that better match other professions.
- 28) Complement Singapore's strong Continuing Education and Training system with post-secondary institutions to:
 - Build and strengthen pathways between the post-secondary educational institutions
 - Broaden pathways by allowing for multiple entry points based on different certifications, experience and job skills
 - Defer decision points by allowing people to take time off for internships, flexibility for gap years, etc.
 - Lengthen education pathways, allowing for return to study by working adults through work-study arrangements, or on the job training through employer-school partnerships

Healthcare System Recommendations

- 29) Clearly define the state's universal healthcare coverage commitment, by establishing what the state would pay for, what it would subsidise and what it would not.
- 30) Introduce a basic and compulsory universal social health insurance scheme which is low-cost and with no opt-outs, in order to maximise the benefits of risk-pooling and to reduce the effects of adverse selection.
- 31) Broaden the coverage of Medisave, MediShield and Medifund. For example, individuals should be permitted to use Medisave and Medifund for a much wider range of physical as well as mental health treatments. Whilst MediShield coverage should remain primarily for catastrophic diseases, coverage could be extended to non-fatal but high-cost, high-impact conditions such as cleft lips or autistic spectrum disorders.
- 32) Implement inflation-indexation for means-testing criteria, co-payment schedules and MediShield/EldersShield benefits so as to ensure that rapid rises in medical costs do not diminish affordability over time.
- 33) Introduce co-payment caps for at-risk groups, where co-payment requirements should be lifted completely for selected cost-effective preventive health measures such as mammography and pap smears.



- 34) Safety-net eligibility should be made more transparent, to provide further assurance to segments of the population that do not have the necessary medical savings buffers.
- 35) Establish a person-centric health system by shifting the value orientation from professional-centric (specialist doctors and administrators) to patient-centric; from a remedial focus to a preventive and primary care-driven approach; and from an institution-based to a community-based delivery model.
- 36) Develop a localised community health model, where the relationship between health services and the community could be characterised in both directions.
- 37) Foster the co-location of healthcare and other services by shifting the unit of healthcare provision away from the hospital to the locality in which all the different types of social, community, educational and health services are built and organised. In such a model, services are co-located, e.g., a health clinic and a community library in a school.
- 38) Introduce an outcomes-based healthcare regulatory framework that is agnostic about the means of achieving health. Under this framework, public hospitals and clinics can be financed based on national health statistics, and private health centres are held accountable by requiring the publication of their health statistics.
- 39) Broaden primary care financing through the increased portability and eligibility of the subsidies and services available under the Community Health Assist Scheme (CHAS).
- 40) Develop health and long-term care manpower capability with increased training and development programmes for the whole range of health and long-term care professionals.
- 41) Prioritise the National Electronic Health Records (NEHR) initiative by introducing incentives and penalties for all service providers and stakeholders to utilise and participate in the system. A comprehensive NEHR system would allow the system to move towards a patient-centric model and allow more reliable measurement and monitoring of health outcomes and costs.

SOCIAL CAPITAL AND DEVELOPMENT STUDY GROUP

- 1) Ensure a “whole-of-government” approach to social capital development by enhancing the integration of policies and co-ordination of initiatives between the Ministry of Social and Family Development (MSF) and the Ministry of Culture, Community and Youth (MCCY), in the areas of family and social capital; and between these two ministries with the Ministry of Health on issues of active ageing and intergenerational relations.



- 2) Undertake more research on trans-national marriages to facilitate these marriages to become sites of positive rather than negative social capital.
- 3) Review policies on rights and privileges for singles and non-traditional family forms.
- 4) Develop mixed-use infrastructure and facilities to promote family and intergenerational relations, such as a cluster of childcare, senior activity centres, libraries and social enterprises that are tailored to the specific needs of communities.
- 5) Conduct early and targeted health screening and promotion, as good healthy functioning is a fundamental pillar for developing social capital.
- 6) Consider the creation of alternative care arrangements for the elderly, for example, allowing the formation of a quasi-family unit where elderly Singaporeans are allowed to live together in the same housing unit and care for one another with legally recognised rights and responsibilities.
- 7) Systematically engage non-Permanent Resident foreigners on issues of harmonious relations across different nationalities, races and religions.
- 8) Conduct citizen-led mandatory and voluntary programmes to help suitable foreigners better understand Singapore before they become PRs and new citizens.
- 9) Review regulatory safeguards and barriers to entry for social and community services provided by racial and religious groups.
- 10) Involve social enterprises and non-profit organisations in businesses, job creation and skill development for Singaporeans.
- 11) Prioritise the creation of value-added jobs for Singaporeans and the development of a Singaporean core at worker and leadership levels.
- 12) Extend the role of the Tripartite Alliance for Fair Employment Practices (TAFEP) in promoting fairness at work to include the full range of functions such as education, engagement, arbitration, regulation, accreditation, enforcement and deterrence.
- 13) Enhance the “whole-of-government” approach to address social mobility, by developing alternative measures for assessing income inequality and social mobility; undertaking more data on households that will allow longitudinal tracking to assess relevant economic and socio-psychological variables over time; and integrating policies concerning education, family and social development, manpower planning, immigration policies, economic development and restructuring.
- 14) Establish a national secretariat at the Prime Minister’s Office to lead and co-ordinate strategic directions for research and policy related to social mobility.





- 15) Develop multiple indicators of integration potential to complement the existing criteria for selecting foreigners and granting permanent residency status and citizenship.
- 16) Revisit Singapore Shared Values and National Education by involving a wide spectrum of Singaporeans in a review of Singapore's shared values, which is linked to the National Education framework.
- 17) Promote social interactions through intensification of land use and integrated living to create a high-quality physical environment that is conducive to promoting social interactions and therefore social capital.
- 18) Monitor multiple indicators of social capital and social well-being for the different segments of the population and provide continuous input to population policies.
- 19) Develop effective communication and crisis management plans to address conflicts that threaten social cohesion.
- 20) Recognise National Service (NS) beyond monetary rewards, by introducing a holistic recognition system for those serving or have served NS, with a focus on benefits that are non-monetary in nature (opportunities for training, social recognition) or are less explicitly tied to money (such as subsidised healthcare, access to facilities, priority in housing).
- 21) Consider a form of NS for female citizens that could incorporate meaningful aspects of community-based work ("NS-in-the-community").
- 22) Use of NS and "NS-in-the-community" as a strong indicator of commitment when reviewing applications for PR status or citizenship, and make PR renewals for the family contingent on fulfilling the NS obligation.
- 23) Shorten the duration and increase the quality of NS, by increasing the efficiency and effectiveness of training in NS, and the quality of the NS experience.



Chapter 1

Introduction



CHAPTER 1: INTRODUCTION

1.1 CONCEPTION OF POS2050

Singapore's Total Fertility Rate (TFR) has been below the replacement level of 2.1 births per woman for more than three decades, with an "ultra-low" level of less than 1.3 births per woman since 2003. The implications of such low TFRs and extended life expectancy are that the population will age, and in time rapidly decline. This could in turn have important economic, social and political implications for the country.

In 2007, the Institute of Policy Studies (IPS) embarked on a project to generate scenarios of Singapore's future population growth, size and age structures under various assumptions of fertility, mortality and migration trends over the period 2005–2050. The results show that under conditions of zero net in-migration and moderately rising life expectancy, if the TFR remains at the ultra-low level of 1.24 births per woman from 2005 onwards, Singapore's resident population would begin to decline around 2020–2025, and the median age of the population reach 55 years in 2050. Raising the TFR would modestly delay population decline and slow the rate of ageing, but demographic momentum would mean that Singapore would still experience adverse challenges for the population over the next four decades.

Singapore's recent experiences with raising the TFR and increasing immigration have shown that whilst the former is difficult to achieve, the latter has also its drawbacks. Although these challenges are not unique to Singapore, the consequences of demographic change are likely more keenly felt here than elsewhere due to Singapore's small size and high density urban living environment. In addition, there are likely to be unique issues that Singapore needs to address due to its status as a city-state and the socio-political contexts associated with population policies.

In June 2012, having extended the population projections analysis to encompass the total population (including non-permanent resident foreigners) and the labour force, IPS convened the Population Outcomes: Singapore 2050 (POS2050) project to consider and analyse public policy issues arising from Singapore's demographic challenges through 2050, and offer possible solutions to address them. The project work was undertaken by six study groups comprising 55 persons with relevant expertise drawn from academia and the public, private and people sectors. This report is the result of the study groups' eight-month discussion and work, which drew on their knowledge and expertise from their respective fields.

1.2 TERMS OF REFERENCE AND REVIEW PROCESS



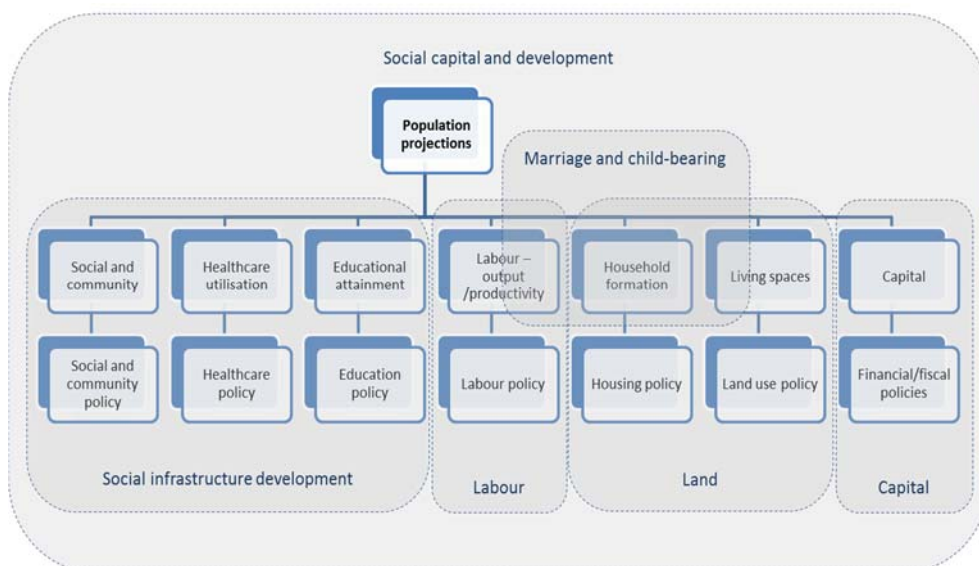
The six study groups studied the demographic scenarios generated by the IPS, discussed their implications and identified policy recommendations in the following substantive areas:

- Capital (the economic impact, including public sector expenditure, savings and taxation)
- Labour (workforce, output and productivity)
- Land and physical infrastructure development
- Marriage and child-bearing
- Social infrastructure development
- Social capital and development

The objective of the POS2050 project was to (1) undertake a holistic, multi-disciplinary review of the economic, social and political implications of the projected demographic scenarios for Singapore over the next 40 years, and (2) identify the policy options available to respond to demographic trends. The ultimate goal is to identify balanced and flexible policies that can ensure that Singapore's future generations will be able to live, work and play in a good environment, and in a sustainable manner. The terms of reference were first formulated by the IPS, taking into account what was viewed as the most critical aspects of the demographic challenges in the respective areas, and subsequently revised by the study groups upon further extensive discussions with consensus from the IPS.

Figure 1.1 Schematic diagram of the POS2050 study groups and their areas of focus





In June 2012, the six study groups' leaders were invited by IPS to put together their groups comprising individuals with relevant expertise who could contribute to the deliberations of their respective groups (the list of study group members is set out in Appendix 1). Each study group undertook their discussions independently, and in February 2013 the groups came together at a plenary session where key issues were deliberated amongst the members who were present. After the feedback from the plenary session, the groups then refined their arguments and produced their individual draft reports. The study groups' summary reports are presented as separate chapters in this report.



1.3 POPULATION PROJECTIONS USED IN POS2050

The study groups were asked to consider public policy issues within their areas of focus (see later section on “Guiding principles for POS2050”) in the context of IPS’ Population and Labour Force Scenarios set out below.

Three scenarios of the resident population were provided to the study groups:

- Scenario 1: TFR remains constant at 1.24 births per woman from 2005 onwards and there is zero net addition of citizens and permanent residents (PRs) throughout the projection period of 2005–2050.
- Scenario 2: TFR remains constant at 1.24 births per woman from 2005 and there is a 30,000 net addition of citizens and PRs annually throughout the projection period of 2005–2050.
- Scenario 3: TFR rises gradually from 1.24 to 1.85 births per woman by 2015 before stabilising at this level and there is zero net addition of citizens and PRs throughout the projection period of 2005–2050.

Mortality assumptions were held constant in all scenarios, with life expectancy at birth increasing from 77.4 years in 2005 to 79.7 years in 2050 for males, and from 81.3 to 84.6 years over the same period for females. The base population was the resident population in 2005.

From the base resident population in Scenario 2 above, three scenarios were further derived to project the total population, on differing assumptions of mix of non-resident foreigner to resident population as below:

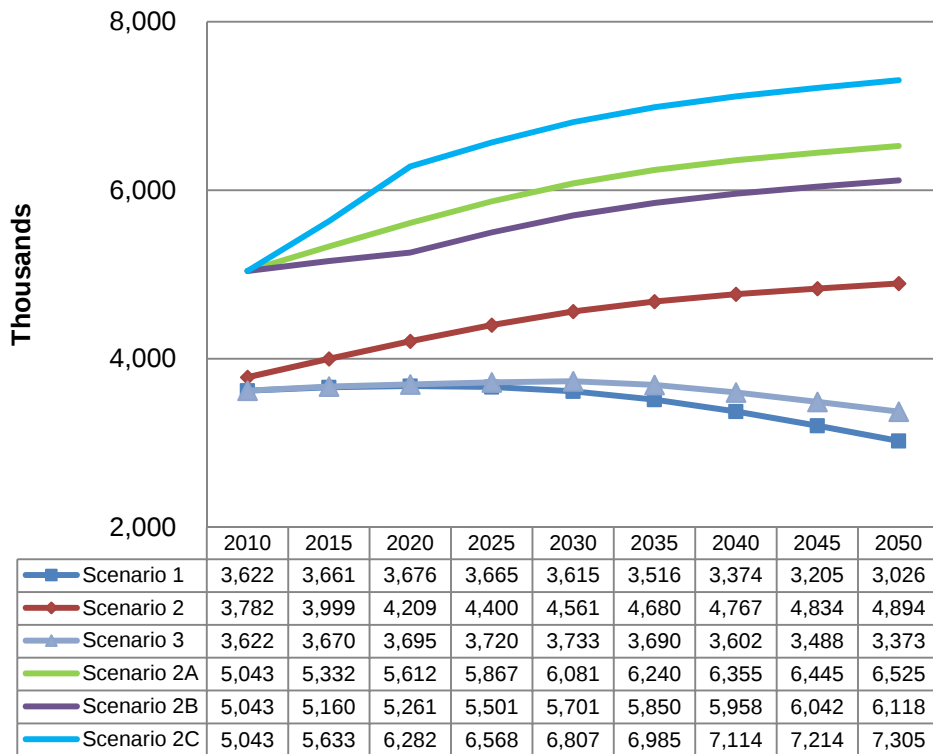
- Scenario 2A: Non-resident foreigners make up 25% of the total population (i.e., one in four of the total population is a non-resident foreigner)
- Scenario 2B: Non-resident foreigners decline from 25% in 2010 to 20% of the total population in 2020 and remaining constant at this level thereafter (i.e., one in five of the total population is a non-resident foreigner)
- Scenario 2C: Non-resident foreigners rises from 25% in 2010 to 33% of the total population by 2020 and remaining constant thereafter (one in three of the total population is a non-resident foreigner)



The labour force was projected in each of the Scenarios 2A–C above, on the assumption that 2010 age-specific resident labour force participation rates apply throughout the projection period and the ratio of working to non-working non-resident foreigners is 4:1.

The results of the projections are presented below. Scenarios 1 and 3 indicate resident population sizes in 2050 that are lower than that in 2010, whilst with Scenario 2 (with 30,000 net addition of citizens and PRs annually) the resident population would grow to 4.9 million in 2050 (Figure 1.2). Scenarios 2A–C result in projected total population numbers in 2050 ranging from 6.1 million to 7.3 million (Figure 1.2).

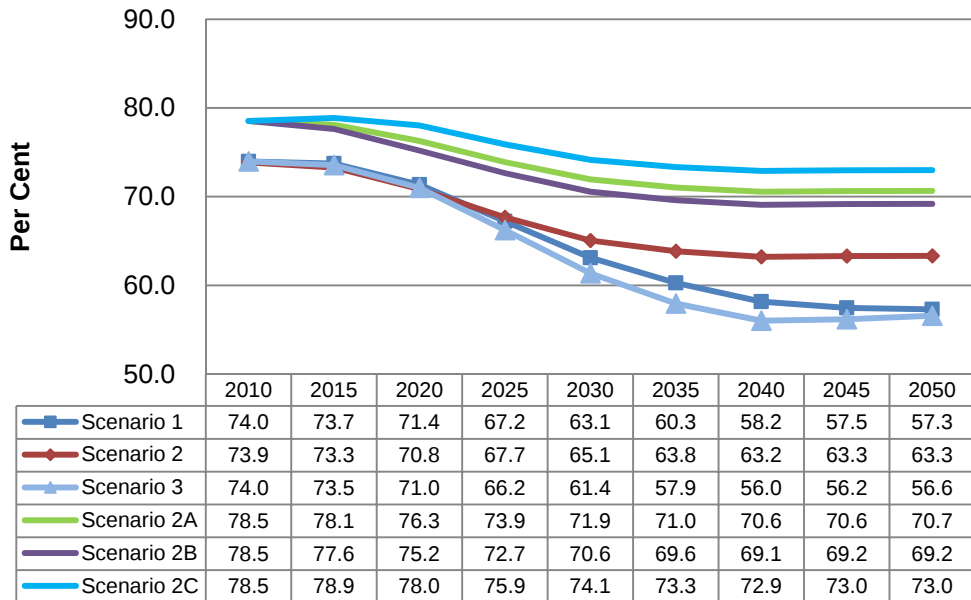
Figure 1.2 Resident population projections: Scenarios 1–3, and Total population projections: Scenarios 2A–C





The proportion of the resident population in the age group 15–64 years declines from about 74% in 2010 to 57–63% in 2050 in Scenarios 1–3, whilst the proportion of the total population in this age group would fall less sharply from about 79% in 2010 to 69–73% in 2050 in Scenarios 2A–C (Figure 1.3).

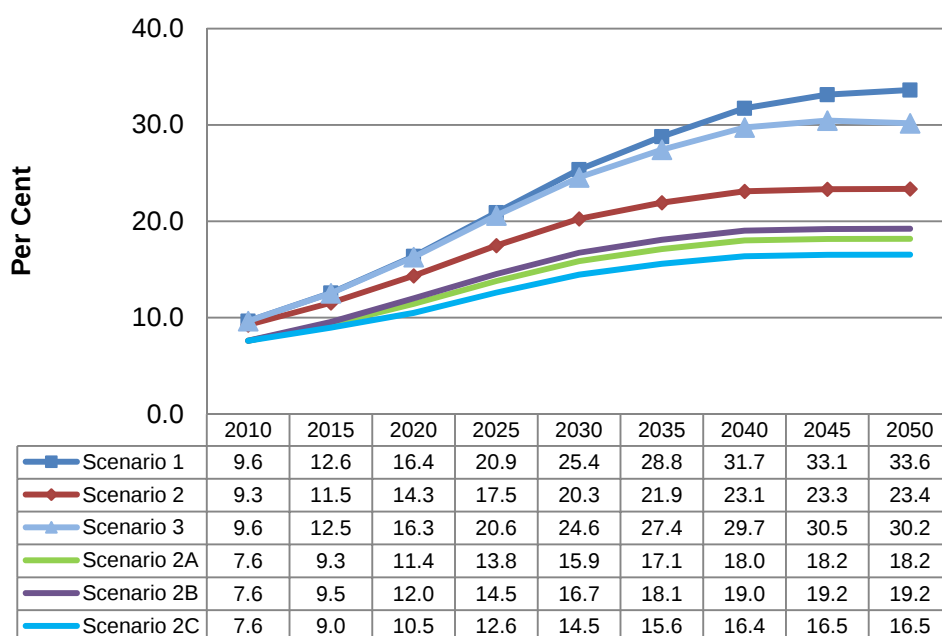
Figure 1.3 Proportion of resident population in ages 15–64: Scenarios 1–3, and proportion of total population in ages 15–64: Scenarios 2A–C



The proportion of persons aged 65 years and older in the resident population would rise from 9–10% in 2010 to 23–34% in 2050 in Scenarios 1–3, whilst the proportion of this age group in the total population would rise from 8% in 2010 to 16–19% in 2050 in Scenarios 2A–C (Figure 1.4).



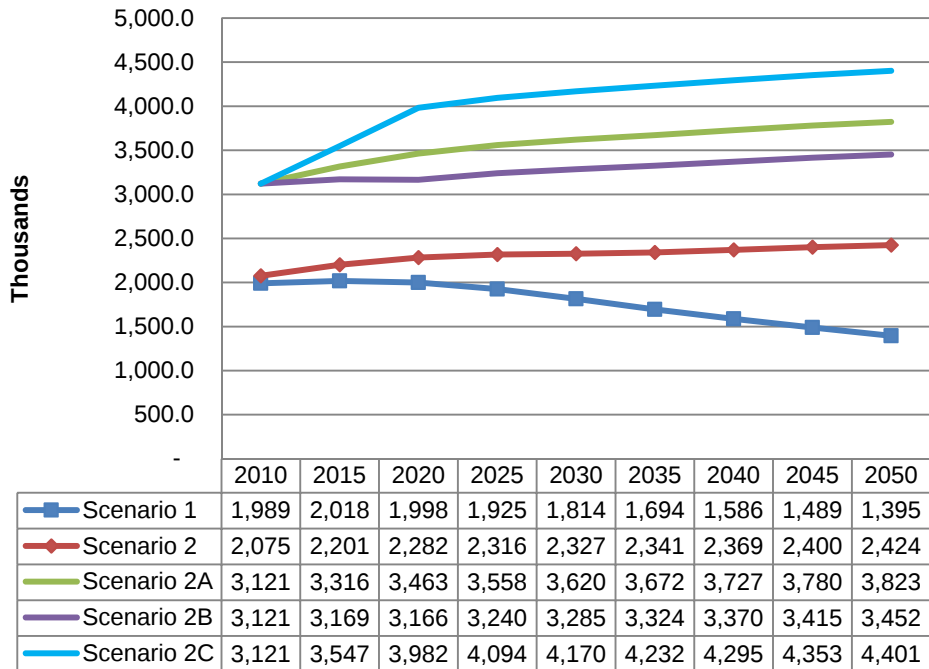
Figure 1.4 Proportion of resident population aged 65 years and above: Scenarios 1–3, and proportion of total population aged 65 years and above: Scenarios 2A–C



The labour force projections presented in Figure 1.5 below show similar trajectories as that for the total population. The resident labour force in Scenario 2 would rise from 2.076 million in 2010 to 2.424 million in 2050, whilst the total labour force would rise from 3.122 million in 2010 to a range of 3.452–4.402 million in Scenarios 2A–C (Figure 1.5). In Scenario 2A, non-permanent resident foreigners would constitute 37% of the total labour force in 2050, up from 34% in 2010. In Scenario 2C, non-permanent resident foreigners would constitute 45% of the total labour force in 2050.



Figure 1.5 Resident and total labour force: S1, S2, S2A–C compared



The compound annual growth rates in the total labour force in 10-year intervals and for the four decades from 2010 to 2050 are shown in Table 1.1 below.

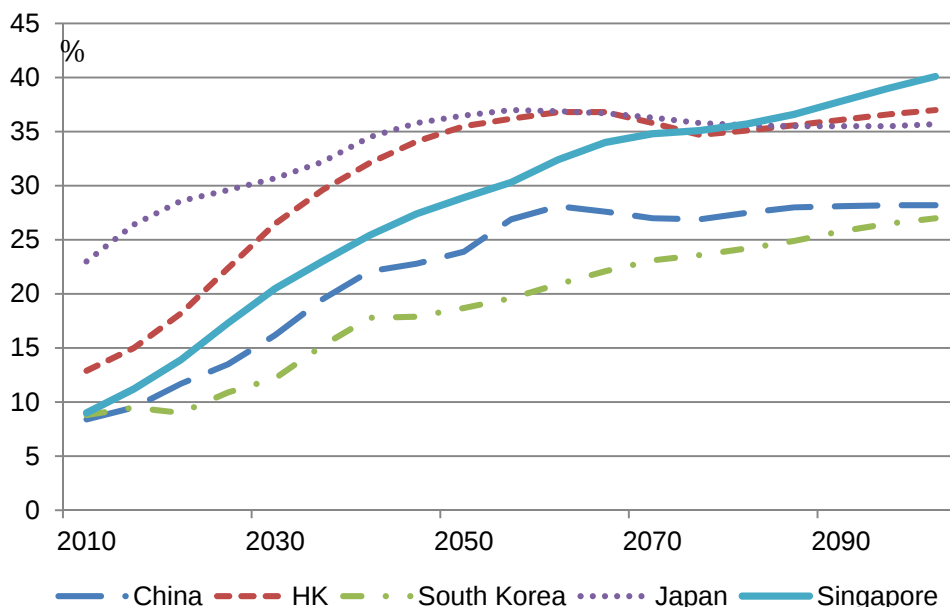
Table 1.1 Compound annual growth rate in total labour force (CAGR %)

	Scenario 2A	Scenario 2B	Scenario 2C
2010–2020	1.04	0.14	2.47
2020–2030	0.44	0.37	0.46
2030–2040	0.29	0.26	0.30
2040–2050	0.25	0.24	0.25
2010–2050	0.51	0.25	0.86

1.4 SINGAPORE'S DEMOGRAPHIC ISSUES

As indicated above, Singapore's ultra-low fertility rates and increasing longevity are contributing to one of the most rapidly ageing populations in the region. According to the United Nations' *World Population Prospects: The 2012 Revision*, the proportion of the Singaporean population aged 65 years and older will rise more than three-fold from 9% in 2010 to 28.9% in the next four decades, an increase only exceeded by Hong Kong SAR in the Asia region (Figure 1.6).

Figure 1.6 Selected Asian countries: Proportion of population aged 65 years and above



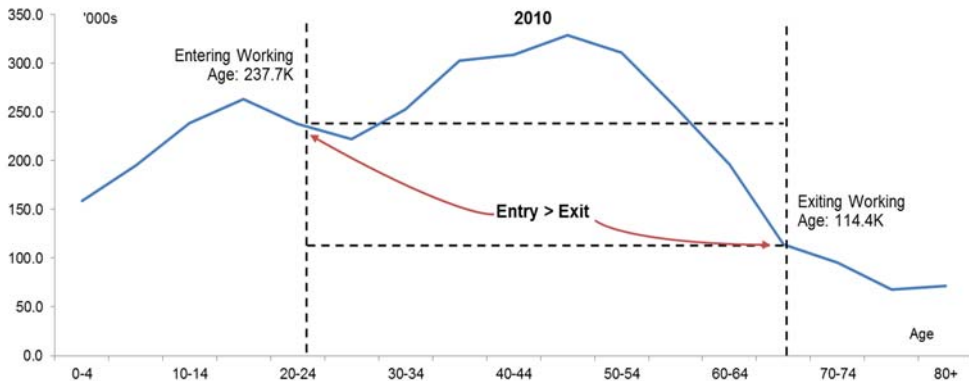
Source: United Nations Department of Economic and Social Affairs, *World Population Prospects: The 2012 Revision*. http://esa.un.org/wpp/unpp/panel_indicators.htm (accessed 19 July 2013). The UN projection for the proportion of population aged 65 years and above in Singapore differs from IPS' estimates from 2010-2050 (see Figure 1.4 above) mainly in migration assumptions utilised.

In 2010, the age-profile of the resident population was such that the numbers of people that can be expected to enter the working ages of 20–64 years over the next five years were double those exiting, with 237,700 persons in the age group 15–19 years as compared to 114,400 persons at age 60–64 years (Figure 1.7). By 2030, however, the situation would have reversed, with greater numbers of people passing beyond as compared to those entering the working ages, with 294,300 persons projected to be of age 60–



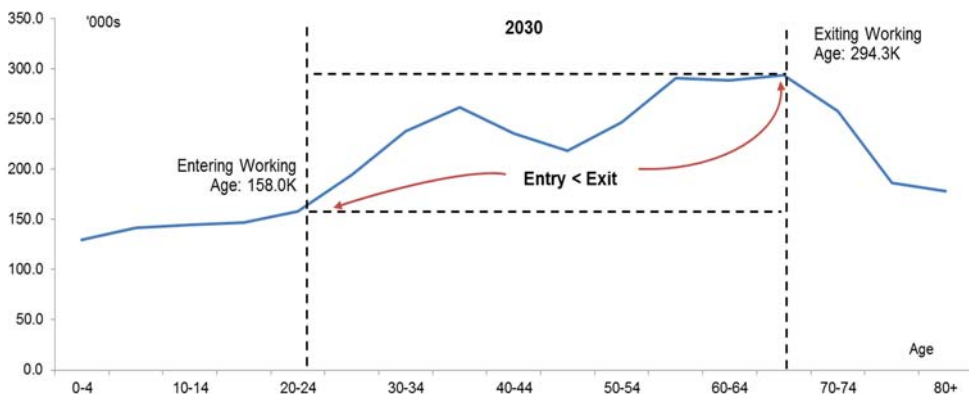
64 years as compared to only 158,000 persons aged 15–19 years (Figure 1.8).

Figure 1.7 Singapore: Resident population entering and exiting working ages in 2010, Scenario 1



Note: Adapted from charts referenced in Deputy Prime Minister Teo Chee Hean's Committee of Supply speech 1 March 2012

Figure 1.8 Singapore: Resident population entering and exiting working ages in 2030, Scenario 1



Note: Adapted from charts referenced in Deputy Prime Minister Teo Chee Hean's Committee of Supply speech 1 March 2012

This shrinking of the working-age resident population would contribute to a decline in the resident labour force. If labour force participation rates of the resident population are not increased (especially for older persons and for women), potential growth in the total labour force (from in-migration) would

reach a tipping point (more people exceeding working age than entering) sometime between 2015 and 2020, based on IPS' population projections.

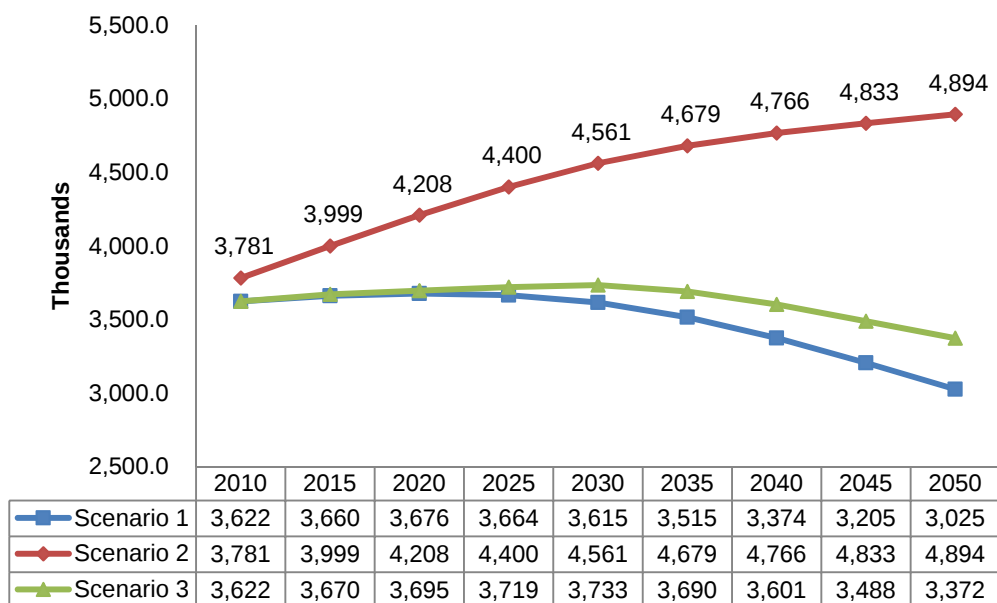
There would still be a steady deterioration in the resident old-age dependency ratio¹ even if the TFR were to rise to 1.85 (as described earlier in Scenario 3).

Table 1.2 Resident population old-age dependency ratios: Scenarios 1 and 3

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Scenario 1	13.0	17.1	22.9	31.1	40.2	47.8	54.6	57.7	58.7
Scenario 3	13.0	17.1	22.9	31.1	40.0	47.3	53.1	54.2	53.4

The rapid pace of ageing would be accompanied by a shrinking resident population, even when assuming improved mortality rates. In the absence of in-migration, and assuming TFR remains at 1.24 (Scenario 1), Singapore's resident population is projected to decline between 2020 and 2025. In the event that TFR rises to 1.85 (Scenario 3), the point at which the population would begin to decline is projected to be delayed to between 2030 and 2035 (Figure 1.9).

Figure 1.9 Resident population: Scenarios 1, 2 and 3



1. The old-age dependency ratio is the number of persons at 65 years and above per 100 persons at age 15–64 years.



This decline in the resident population, assuming no increase in the TFR, can be offset by in-migration. On IPS' population projections, a 30,000 per annum net intake of new residents would allow the resident population to continue to grow — albeit at an ever-slowing rate to almost zero population growth towards the end of the projection period in 2050 (Scenario 2).

The old-age dependency ratio in Scenario 2 would be improved as compared with Scenario 1 (Table 1.3). The old-age dependency ratio would be improved further once the non-permanent foreigner population was taken into account (at various resident-foreigner population mixes in Scenarios 2A to 2C as described earlier). It is worth noting that the difference in the old-age dependency ratio is relatively modest in all three scenarios throughout the projection period.

Table 1.3 Old-age dependency ratios: Scenarios 1, 2, 2A–C and 3

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Scenario 1	13.0	17.1	22.9	31.1	40.2	47.8	54.6	57.7	58.7
Scenario 2	12.5	15.7	20.3	25.9	31.1	34.4	36.6	36.8	36.9
Scenario 2A	9.3	11.6	14.6	18.3	21.7	23.8	25.2	25.4	25.4
Scenario 2B	9.3	12.0	15.7	19.7	23.4	25.7	27.3	27.5	27.5
Scenario 2C	9.3	11.0	13.0	16.2	19.0	20.8	22.0	22.2	22.2
Scenario 3	13.0	17.1	22.9	31.1	40.0	47.3	53.1	54.2	53.4

Several commentators, including the United Nations Department of Economic and Social Affairs (UNDESA) Population Division in a paper published in 2000,² have pointed out that massive in-migration would be needed to offset population decline and reductions in the proportion of the population in the working ages (referred to as “replacement migration”) and the social, economic and political repercussions that could arise therefrom. These commentators noted that a re-assessment of a country's basic policies on a broad range of issues would be required. Bermingham (2001) in particular highlighted the following issues that would need consideration:

- Percentages of the working-age population actually working
- Appropriate ages for retirement
- Levels and types of retirement and healthcare benefits for the elderly
- Sources of funds to support these programmes

- The need for increases in economic productivity

2. See UNDESA (2000), Espenshade (2001), Meyerson (2001) and Bermingham (2001).





- Policies and programmes related to migration, including integration

1.5 GUIDING PRINCIPLES FOR POS2050

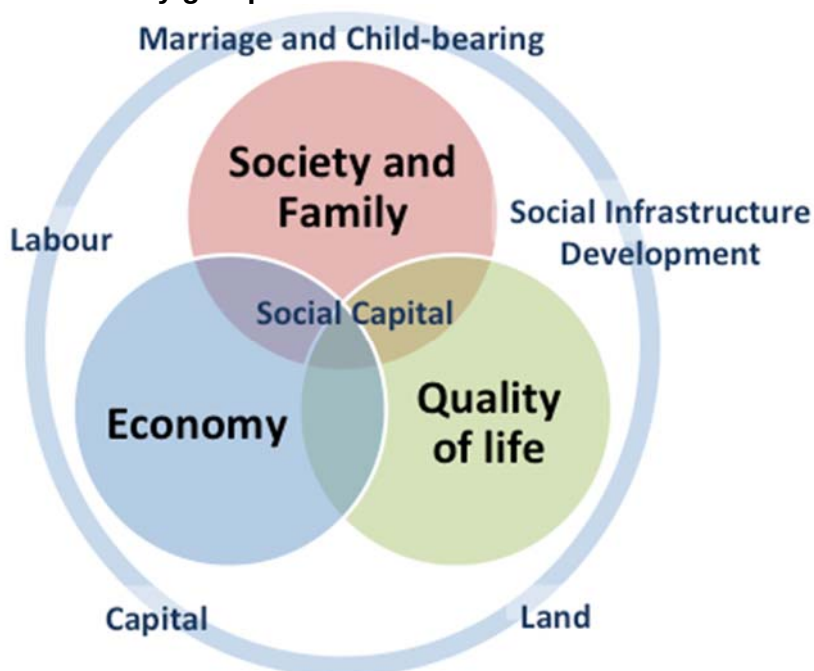
The POS2050 study groups were provided with the IPS Population Projections, and a number of inter-related issues were posed for their consideration. These issues were set out in three areas:

- Society and Family
 - Will the changing demographics and generational mix create new dynamics for the family unit and divisions between young and old?
 - While in-migration can offset the ageing and shrinking of the population to some extent, could it introduce social and economic tensions between foreigners and locals?
- Economy
 - Will Singapore's growth model have to be adjusted to ensure sustained economic growth and prosperity without inequity?
 - How will the country's economic performance and resilience be affected by its immigration policies?
- Quality of Life
 - While the economy may be more vibrant with higher levels of in-migration, will the quality of life be affected by increased population density and the consequent pressures on the country's infrastructure?

The distinction of the POS2050 project lies in the multi-disciplinary nature and holistic thinking capabilities of the six study groups and their members. The study groups were encouraged to consider matters related to Singapore's demographic challenges outside their immediate specialisations, and to cross-reference the work of the other study groups where applicable. In practice, we found that there was considerable overlap and inter-relationships in many of the discussions held by the study groups, with each of the study groups dealing with the issues in all three areas (Figure 1.10).



Figure 1.10 Schematic diagram of inter-linkages in issues discussed by POS2050 study groups



1.6 OVERALL CROSS-CUTTING OBSERVATIONS AND RECOMMENDATIONS

The recommendations of each POS2050 study group were made independently, albeit with the benefit of the feedback arising from the joint plenary session held in February 2013. However, it quickly became clear to the IPS Secretariat co-ordinating the study groups' work that there are several cross-cutting themes and policy recommendations, with similar points of view and prescriptions having been formulated by several of the groups independently from their various specialist perspectives. We highlight below the major cross-cutting recommendations.



Adopt “Whole-Of-Government” Approach to Addressing Complex and Multi-dimensional Challenges in Singapore’s Demographic Trajectory

Singapore’s population challenges reach into many aspects of living and working in a small and modern global city-state. The complex and multi-dimensional nature of the issues — ranging from population ageing and productivity growth to ensuring good jobs whilst enhancing work-life balance — requires an integrated and co-ordinated approach across different ministries and government agencies. For example, as highlighted by the Social Capital and Development study group, to tackle the development of family relationships and inter-generational ties, there needs to be policy integration between the Ministry of Social and Family Development (MSF) and the Ministry of Culture, Community and Youth (MCCY). Whilst the Ministry of Health (MOH) and the MSF have restructured their departments and certain agencies that deal with the elderly, the development of a wider and more effective social safety net may require stronger and closer co-ordination between the Ministry of Manpower (MOM) and some of its agencies such as the Central Provident Fund (CPF) with the aforementioned ministries. A number of the recommendations of the study groups may require action or steps to be taken by multiple agencies and ministries, many in co-ordination with one another for these to be effective.

Embed and Locate Services, Functions, Institutions in the Community and the Community into those Functions and Institutions

The development of social capital is multi-dimensional and requires the government to work in tandem with the people and the environment for solutions that are truly integrative. In addition to the “whole-of-government” approach mooted above, we suggest the development of a “whole-of-society” effort as well, by embedding and locating services, functions, institutions within the community, and integrating the community within the provision of such services and in decision-making by those institutions. An example provided by the Social Infrastructure Development study group is the school-in-community / community-in-school concept. The development of this “whole-of-society” philosophy will require greater trust between the state and the people — a necessary pre-condition to activate the multiplicative effects of the solutions recommended to address Singapore’s demographic challenges.



Review Role of the State in the Provision of Welfare

There was recognition amongst the study groups that the challenges arising from the country's demographic trajectory should prompt a significant review of the social compact. The Social Infrastructure Development study group noted that the current blend of limited government funding and demanding government control in many domains might have resulted in a culture of dependency on the state, notwithstanding the pre-dominant narrative of self-reliance. In a number of domains — spanning manpower, healthcare, community development and marriage and child-bearing — the study groups highlighted areas where they felt government intervention needed to increase to improve societal well-being as well as others where the government needed to take a reduced role. A comprehensive review of the role of the state in the provision of welfare is necessary, therefore, in order to ensure coherence and consistency in social policymaking in the complex landscape of the next four decades.

Emphasise Importance of Health and Healthy Living

Several study groups focused on the link between health and economic productivity as well as between healthy living and societal well-being. A healthy workforce would be more productive and capable of working longer, increasing labour force participation across all ages, but notably amongst older workers. The Social Capital and Development study group highlighted that good healthy functioning is a fundamental pillar for developing social capital, with many social interactions and relationships presupposing a basic level of health amongst the people. Healthcare expenditure should be seen as less of a necessary evil than an investment that can enhance not only individual well-being, which can also generate significant positive externalities across society and over time. The government should therefore increase its emphasis on low-cost but high-impact interventions in healthcare, especially in situations of great uncertainty where individuals have the greatest difficulty in making adequate choices, or where people are required to make sacrifices in the short-term for the prospect of a gain in the long-term.

Review Education System to Adopt Learning Pathways that Address Needs of a Globalised, Knowledge-based Economy

The central role of education in national and community building as well as for individual development and well-being was reinforced in the recommendations made by the study groups. The Labour study group emphasised the view that the education system is oriented towards standardised examinations and assessments, which tend to produce



workers that are better at academic, hierarchical and specialised thinking but who are more risk-averse. The state's considerable investments in education have been suited more to an earlier pre-“knowledge economy” era when industry needs were more structured and predictable, and less towards producing the adaptable, flexible workforce required by an open, globalised knowledge-based economy. Both the Marriage and Child-bearing and Social Infrastructure Development study groups highlighted the high levels of stressful competition in the system that may deter couples from having children (thus reducing the TFR) and contributing to, instead of dampening, inequality and social immobility. There was broad agreement that the education system could be strengthened by building, broadening and lengthening learning pathways and by deepening the collaboration of employers with the education system in terms of developing curricula that best suit their needs.

Re-think Concept of Ageing and Consider the Elderly as Assets rather than Liabilities

The concept of old-age dependency was discussed extensively amongst the study groups. The threshold age of 65 years is used in almost all studies on ageing (and indeed in the definition of the dependency ratio) as the point at which people are no longer able to contribute and become a burden on the younger generation. There was consensus amongst the study groups that this arbitrary conceptualisation of old-age dependency frames ageing in unambiguously negative terms, with older persons viewed as liabilities and associated with decline. Across the groups there was recognition that, at the national, community and individual levels, older persons possess not only economic capital but also significant human and social capital that could be harnessed for the good of all of society. In policymaking terms, therefore, this might mean considering older persons as assets that can be part of a policy solution and reframing social expenditure on older persons as a continuous investment in human capital in cost-benefit analyses.

Develop Person- and Citizen-centricity in All Aspects of Policymaking

The policy-making emphasis on nation building in the past 48 years has served Singapore well, facilitating the country's rapid economic development over that time and vastly improving the well-being of its population. Singapore's robust growth over the past four decades coincided with a period of very favourable demographic trends, with rapid increases in the working-age population, complementing significant educational expansion and health improvements to maximise the returns to its human capital. The transition to a slower economic growth trajectory is accompanied by the demographic challenges resulting from ultra-low fertility and increased



longevity: a rapidly ageing and shrinking resident population. In the view of the POS2050 study groups, this economic and demographic transition requires a shift in the public policy focus towards person- and citizen-centric models of policymaking. For example, this may entail a change in the key measures used to assess economic performance, from aggregate Gross Domestic Product (GDP) to GDP per capita or growth in median incomes. Indicators related to the state of social cohesion, inclusiveness, trust, commitment, rootedness and social mobility should be developed and used as the fundamental benchmarks against which the analyses and decisions in policy-making are made.

Champion the Importance of Data and Data-sharing

The multi-dimensionality of the demographic challenges places a premium on reliable data on which to base policy decisions. The study groups emphasised the importance of information and reliable data in devising efficient and sustainable policies, especially when issues span ministerial or agency lines of responsibility. The study groups are of the view that data is often collected and stored in departmental, agency or ministerial silos, which prevents cross-referencing and the development of richer data-sets from which more informed analysis can be conducted. Whilst recognising that the government has made efforts to improve the provision of data, the study groups recommend that the government adopt a “make available” default for the data it collects, subject to privacy and national security provisos.





1.7 REFERENCES

- Bermingham, J. R. 2001. "Immigration: Not a Solution to Problems of Population Decline and Aging", *Population and Environment* 22(4): 355–63.
- Espenshade, T. J. 2001. "'Replacement Migration' from the Perspective of Equilibrium Stationary Populations", *Population and Environment* 22(4): 383–89.
- Meyerson, F. A. 2001. "Replacement Migration: A Questionable Tactic for Delaying the Inevitable Effects of Fertility", *Population and Environment* 22(4): 401–9.
- United Nations Department of Economic and Social Affairs (UNDESA). 2000. *Replacement migration: is it a solution to declining and ageing populations?* New York: United Nations Department of Economic and Social Affairs, Population Division.



Chapter 2

Capital



CHAPTER 2: CAPITAL

2.1 TERMS OF REFERENCE

This chapter considers the overall economic impact of an ageing and shrinking resident population on public sector expenditures, the nature of savings and national reserves, pension schemes and taxation, with the objective of making specific policy recommendations on these issues.

2.2 BACKGROUND

Policymakers in Singapore have focused on avoiding or *mitigating* an ageing and shrinking population. This underpins the government's efforts to raise the fertility rate and maintain relatively high levels of immigrants and foreign workers to make up for the expected shortfall of workers. This emphasis is based on two assumptions:

- 1) Demographic trends affect economic growth, with the age structure of the population playing a central role (Bloom and Canning 2008). Economic needs and contributions vary considerably over the life course. The young tend to be net consumers while people of working age tend to be net producers and savers, and the elderly falling somewhere in between. The age structure of a population is therefore quite consequential for its economic performance, as measured by income per capita. Large youth and elderly cohorts slow economic growth while large working-age cohorts speed it.
- 2) The accounting effects of population ageing slow economic growth. In developed countries, an ageing population is likely to have a large and adverse effect on income per capita mainly through the fall in labour supply per capita that will accompany a fall in the share of the working-age population. An ageing population also reduces the national savings rate, reducing the availability of resources for investments.

Singapore's focus on mitigation, however, overlooks the need for adaptation. Policy and institutional changes could encourage people to behave differently and help our economy and society adjust successfully to an ageing population. The mitigation approach is unrealistic also because the government cannot dictate reproduction. Mass immigration, moreover, is economically undesirable and politically unpopular.

Social norms play a bigger role than financial incentives in encouraging people to bear children but are hard to change. In the northern European



countries that have managed to increase their total fertility rates (TFRs), norms of egalitarianism, gender equality and solidarity underpin support for child-bearing, alongside strong social protection, heavily subsidised healthcare and public pensions. These countries raised fertility rates by offering paid maternity and paternity leave and heavily subsidised and excellent childcare.

The norms that underpin social support in the northern European countries are mostly missing in Singapore, which explain why the government's financial incentives have had limited impact on fertility rates. There are relatively low levels of spending on social safety nets, public pensions are absent, and the emphasis instead is on individual and family responsibility. In Singapore's context, it may be economically rational for a household to have fewer or no children even if this decision is collectively irrational at the national level.

Liberal foreign labour policies may be economically undesirable because the benefits of agglomeration (i.e. the gains in productivity as more skilled people work close together and knowledge spreads) may be limited to skills- and knowledge-intensive industries and offset by the negative externalities caused by a large foreign worker population (e.g., depressed wages).

Large-scale immigration is politically sensitive because citizens bear the costs of the population increase and do not necessarily see how immigration benefits them. For citizens, the increased competition for jobs may depress wages and reduce incentives for employers to raise labour productivity. Another effect of high levels of labour immigration is its impact on identity, culture and the provision of public goods.

The mitigation approach also overlooks how people might change their behaviour as the population ages, diminishing the accounting effects. For instance, the labour supply is unlikely to contract as sharply as demographic trends suggest because the future elderly are likely to live and stay in good health for a longer time.

The ageing trend in Singapore's population need not necessarily lead to an increase in the number of years lost due to poor health or disability. Increases in life expectancy over the last two centuries have been associated with reductions in the age-specific incidence of disease, disability and morbidity (Costa 1998; Fogel 1994 and 1997). Mathers et al. (2001) show that health-adjusted life expectancy increases in tandem with life expectancy across countries. This suggests that the length of ill health at the



end of life appears to be constant and that as life expectancy rises, the years spent in good health increases by just as much.¹

With better health and increased longevity, individuals can work longer, stemming a decline in the labour supply per capita. The theoretically optimal response to rising life expectancy is to increase the number of working years and the number of years in retirement proportionately, without changing period-specific saving behaviour.²

The impact of an ageing population on the labour supply may be softened by a higher labour market participation rate. As the share of the workforce in the population shrinks, rising wages will raise labour market participation, particularly among women and the younger elderly. If the supply of labour is sufficiently elastic, the required rise in wages need not be large.

The elderly too contribute to society, rather than drain resources as the term old age “dependency” implies. At the national level, governments tax middle-aged, productive workers and transfer benefits to the young and the old. But at the household level, elderly households make significant transfers to younger and middle-aged members, undoing some of the effects of government policy. The “dependency” burden that is often invoked to raise alarm about population ageing is more a function of the tax-and-transfer systems that are in place rather than an immutable state of affairs (Bloom and Canning 2008). Singapore’s relatively low levels of social (and public) spending (Figure 2.1), coupled with the fact that the state does not provide any tax-financed pensions or much by way of social transfers to older persons,³ suggests that it has significant adaptive potential in public policies,

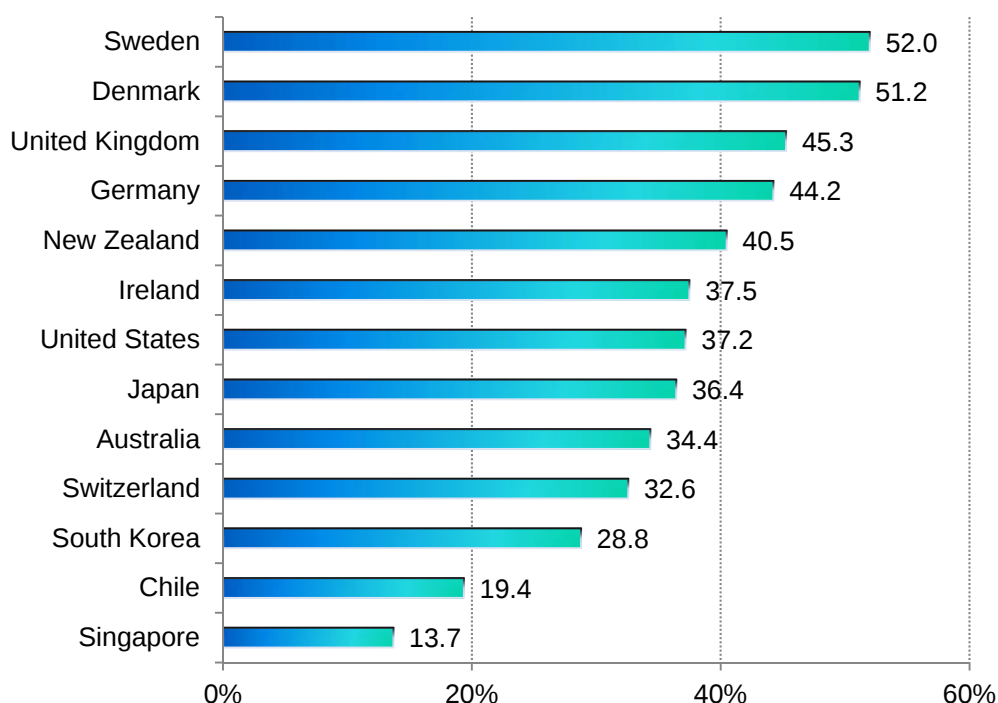
1. This “compression in morbidity” — in relative if not in absolute terms — does *not* mean that healthcare spending as a share of income will not rise as the population ages. It almost certainly will, simply because there will be many more elderly people.

2. In many OECD countries, this theoretical response has not been observed. In most OECD countries, labour participation among those above 60 has, until recently, decreased rather than increased in spite of improvements in life expectancy over the last several decades. Experts argue that this divergence between theory and how people actually behave is due mainly to the incentives for earlier retirement in many of these countries’ social security systems. As shown in Gruber and Wise (1998), most social security programmes in OECD countries feature several direct and indirect incentives for individuals to retire early rather than continue working. In some countries, retirement is mandatory in order to receive pension benefits; in others, pension rates are kept flat or adjusted in a way that is not actuarially fair, so additional years of contribution are given only partial credit or no credit at all. This experience internationally suggests that it is not wise to (inadvertently) create disincentives against older Singaporeans working longer.

3. Social transfers constitute a very small part of the Singapore government’s total outlay, while in most other developed countries they comprise a significant share of

institutions and norms. If society and its policies can adapt, there may then be less of a need to worry about the fiscal or dependency burden of the ageing population.

Figure 2.1. Public spending as share of GDP in selected countries, 2010



Sources: OECD 2011; Ministry of Finance, Singapore

Even if ageing did lead to lower levels of income per capita, this does not necessarily imply a decline in economic well-being. Well-being depends primarily on consumption, not income. Typically, household income falls at retirement, while consumption remains relatively high. An older population with a lower per capita income may be able to sustain a similar level of consumption — and therefore similar levels of well-being — as compared with a younger population with higher per capita income. Ageing-induced decline in income per capita may not necessarily result in a decline in well-being, particularly if accumulated savings can be deployed to offset lower income. Furthermore, at retirement, older people may begin to contribute as

public spending. For instance, Sweden and France devote about 30% of their GDP to social transfers alone, while Denmark, Finland and Germany spend about a quarter. Even the United States directs about 16% of its national income this way (OECD 2010).

volunteers or help with family tasks — activities that are not accounted as part of a country's income. This highlights the inadequacy of using GDP (or GDP per capita) as a measure of economic well-being.

Adapting Policies and Institutions to Ageing

Behavioural changes in response to demographic trends may be amplified or dampened, facilitated or hampered by institutions and policies.

Singapore's economic history reflects its demographic development over time. The baby boom from the late 1940s to the early 1960s, combined with falling child mortality rates, produced a demographic dividend that boosted the economy. As the baby boomer generation entered the workforce from the late 1960s, labour supply significantly expanded at a time of rapid industrialisation. This expansion in the working-age population as a share of the total population helped the country to achieve rapid economic growth. At the same time, a high savings rate made possible by the low dependency ratio and enabling policies (such as the increase in CPF rates over time) provided the resources for significant increases in investments. It also allowed the state to build up sizeable financial reserves, especially from the late 1980s. According to some studies, as much as one-third of the East Asian economic miracle can be accounted for by the demographic dividend (Bloom and Williamson 1998; Bloom, Canning and Malaney 2000; Mason 2001).

The experience internationally, however, does not support demographic determinism because complementary policies and institutions are needed to reap the demographic dividend. A large working-age population requires a corresponding increase in the demand for labour. Without appropriate policies, the surge in the working-age population could result in unemployment and underemployment, higher levels of crime, erosion of trust and social capital, and political instability.

Among the key policies needed to turn the baby boom into a demographic dividend, economists have highlighted the importance of open economies that keep large cohorts of workers productively employed; flexible labour markets and unrestrictive labour laws that support employment creation to absorb the surge of workers; and efficient financial intermediaries to mobilise the savings of baby boomers and channel them to productive investments.

2.3 ANALYSIS

Does Singapore's current institutional framework facilitate or impede adaptation to an ageing population? The four main pillars of Singapore's current institutional framework are:



- Central Provident Fund (CPF) for retirement security
- Home ownership to boost assets and generate retirement security
- Individual responsibility in meeting health and long-term care expenses
- Safeguarding and growing national reserves

Central Provident Fund (CPF)

Unlike the pay-as-you-go systems with high replacement rates found in many OECD countries, the CPF system in Singapore is a fully-funded defined contribution system that, in theory at least, encourages older workers to work for as long as they can and want to. With the exception of the recently introduced CPF LIFE, which is an annuity scheme, the current CPF system relies almost entirely on the principle of individual savings. While this comes with many advantages, chief among which is the fact that an ageing population does not create unfunded liabilities for the state, Singaporeans are almost entirely reliant on their own or their family's resources to deal with retirement and other episodes of income instability (MSF 2013; Yap 2009).

While self-reliance is a good principle in general, it may neither be efficient nor just if taken to extremes. The government should consider how the social security system could strike better balance between individual savings, social insurance, and direct subsidies financed by general taxation.

The current CPF system may deter the elderly from working because employer contributions are significantly reduced for workers above age 55 (Table 2.1). This aims to encourage employers to continue hiring older workers. However, it may also have the unintended effect of pushing older workers into retirement since the reduction in the employer's contributions represents a reduction in wages. On the other hand, raising employer contribution rates for older workers from current levels may discourage employers from hiring older workers in the first place. The experience internationally suggests that it is important not to inadvertently create disincentives against older Singaporeans working longer — a behavioural change that is necessary to counteract the fall in labour supply.



Table 2.1. CPF contribution rates by age

Employee Age (Years)	Contribution Rate (for monthly wages $\geq$ \$750)			Credited into		
	Contribution by Employer (% of wage)	Contribution by Employee (% of wage)	Total Contribution (% of wage)	Ordinary Account (% of wage)	Special Account (% of wage)	Medisave Account (% of wage)
35 & below	16	20	36	23	6	7
35–45	16	20	36	21	7	8
45–50	16	20	36	19	8	9
50–55	14	18.5	32.5	13.5	9.5	9.5
55–60	10.5	13	23.5	12	2	9.5
60–65	7	7.5	14.5	3.5	1.5	9.5
Above 65	6.5	5	11.5	1	1	9.5

Source: Central Provident Fund Board website on contribution rates, <http://mycpf.cpf.gov.sg/Members/Gen-Info/Con-Rates>

Many Singaporean baby-boomer retirees may lack sufficient retirement security because their retirement assets are tied up in housing or their incomes are too low to have generated enough savings (MSF 2013).

Despite Singapore having one of the world's highest savings rates and highest social security contribution rates, just over a third (37.5%) of active CPF members who reached 55 years old in 2009 had met the required CPF Minimum Sum, a benchmark for retirement adequacy, with both cash and a property pledge. Only 20% could meet the CPF Minimum Sum wholly in cash. This means that four out of every five active CPF members who turned 55 in 2009 would not have sufficient cash to meet their basic needs in old age if they did not have other sources of financial support besides their CPF savings.

Lower-middle and middle income Singaporeans may lack retirement security because much of their CPF savings are locked up in housing. While housing represents a store of value that can be unlocked for retirement needs, this presumes that monetisation incurs relatively low transaction costs and house prices are relatively stable (a highly questionable assumption). Households that need to unlock their housing assets may be in the wrong part of the property cycle.

Lower-income Singaporeans in the bottom three or four deciles of the income distribution may lack retirement adequacy because their wages are



low relative to basic needs such that they are unable to accumulate sufficient savings for retirement over their working lives.

Home Ownership

Singapore's housing policy has been geared towards promoting home ownership. The benefits of home ownership include giving citizens a sense of belonging in the country and promoting socio-political stability, as well as offering citizens an asset for retirement. Especially when the population was young and incomes were rising across the board, public housing was also an efficient and incentive-compatible way of spreading the fruits of economic growth.

With the coming wave of baby-boomer retirees who may need to monetise their homes for income and with rising income inequalities, the focus on home ownership may create challenges for retirement adequacy, macro-economic stability and the work ethic.

The exposure to market volatility and a shortage of options to monetise housing assets in old age make it difficult and risky for Singaporeans, especially the retiring baby boomers, to rely on housing for retirement adequacy.

Home ownership exposes retirees who may rely on their homes to generate incomes after retirement to risks in a volatile market prone to crises, as the collapse of the US housing bubble in 2007 showed. Housing is inefficient and inappropriate as a hedge against inflation or as a substitute for social protection against the risks of old age, ill health and unemployment.

Despite efforts to help the elderly monetise their housing assets, such as the lease buyback scheme, the policy emphasis remains on home ownership. The rapid ageing of the population suggests that the focus of government policy has to shift from enabling asset accumulation to helping Singaporeans unlock and monetise their housing assets. For older households, moreover, housing is increasingly a form of consumption, not investment.

Policies to support home ownership, combined with high inequality and historically low interest rates, can become a source of financial and economic instability. Rajan (2010) argues that the main governmental response to rising inequality in the United States (US) was to expand lending to households, especially low-income households. He suggests that promoting home ownership became a convenient substitute for the policies that really address inequality, such as improving access to quality education and strengthening social safety nets. While politically expedient, the government's home ownership objective drove financial deregulation and



fuelled increasing leverage, sowing the seeds for the collapse of the housing bubble and the financial crisis.

As housing price gains outstrip wage growth, as has happened in recent years, Singaporeans may increasingly invest in housing rather than work or pursue careers as a means to grow their incomes. This could erode society's work ethic and thus reduce the potential supply of much-needed labour. It would also mean a diversion of society's resources from productive activities to less productive and potentially destabilising ones.

Health and Long-term Care Expenses

Most of Singapore's policy measures in healthcare have focused on individual responsibility. Health policies have emphasised "getting the incentives right" in the financing system, preventing moral hazard and over-consumption by patients and preventing over-servicing by providers. In this regard, Singapore's healthcare spending is relatively low by developed country standards.

The emphasis on "getting the incentives right," however, is unlikely to curb the growth in national expenditure on health and long-term care spending as the population ages and the incidence of chronic illnesses in our population rises. Health and long-term care costs tend to outpace inflation, regardless of incentive structures, because healthcare consumption tends to increase in absolute terms and as a share of their incomes as incomes rise. Rising healthcare cost is also likely to hurt the poor more than the rich.

The health and long-term care sectors require a high degree of human interaction, making it hard to standardise and automate tasks, raise labour productivity and reduce unit costs. Consequently, increases in labour productivity in these industries are slower than average productivity growth. Yet at the same time, wages in these "stagnant" industries have to increase as quickly as in the rest of the economy so that they can continue to attract workers. As the costs of production in these stagnant sectors rise, prices will also have to rise. This is known as the "cost disease" or the Baumol Effect.

Historical data confirm that this "cost disease" is real. Since the 1980s, the price of university education in the United States has risen by 440% and the cost of medical care by 250%. For the economy as a whole, the average price and wage increases were only 110% and 150%, respectively (Baumol 2012). In Japan, healthcare spending per person rose by 5.7% between 1960 and 2006; in Britain, it rose by 3.5% — in both instances exceeding the average inflation rate. The cost disease can be mitigated to some extent, such as by reducing waste in healthcare or by pursuing innovations that rely less on human contact, such as tele-medicine and mobile health. However,



in health and long-term care, there will always be a significant part (probably a majority) of services that cannot be standardised, digitised or automated. Slower productivity growth in the health and long-term care industry will mean rising costs and prices, suggesting that such expenditures will take up an ever larger part of our incomes.

Even with increasing income per capita, growth is likely to be unevenly distributed. In the context of wage stagnation for lower-income citizens, the risk is that wages will not rise sufficiently fast for them to afford the rising costs of healthcare (and other essential services that are afflicted by the cost disease). To ensure equitable access to good healthcare, Singapore's old mantras of individual responsibility and the reliance on individual savings and family support to meet healthcare expenses will have to be seriously re-evaluated.

Use of Reserves

The government has highlighted the need to raise taxes at some stage to finance the needs of a much larger elderly population and the greater demands for social spending. Such a framing is incomplete. It implicitly assumes that our current fiscal position is optimal and has little "slack" or redundancy. This ignores Singapore's considerable fiscal reserves, which give the state plenty of room for fiscal manoeuvre.

In particular, Singapore could consider how its reserves can be deployed to help cope with an ageing society and promote intergenerational equity. Under existing rules for the protection of reserves, the current government can use up to half the expected net investment returns (NIR) from the country's reserves. This rule is intended to preserve and, if possible, increase the real value of the reserves.

A fiscal policy favouring higher taxation as the default option rather than tapping on the reserves raises the issue of intergenerational equity. Such a policy bias may be considered unfair to the baby-boomer generation that built the reserves, given that many retiring baby boomers may lack retirement security. A significant part of the reserves are the result of fiscal surpluses generated in the 1980s and 1990s — the period when the baby-boomer generation was economically the most productive. Indeed, the reserves accumulated are a net transfer of savings from the baby-boomer generation to the state. Now that the generation that contributed the most to the reserves is entering retirement, it is only fair from an intergenerational perspective that the state reverses (at least a part of) that wealth transfer.

Imposing the fiscal burden of looking after the needs of the baby boomers onto subsequent generations — in the form of higher taxes while continuing



to accumulate reserves — could be considered not only inequitable but also inefficient. A strategy of growing the reserves regardless of context may be considered economically inefficient as it implies a negative reinvestment rate, i.e., that we favour the interests of a future generation (one that is likely to be smaller and richer in *per capita* terms) more than the interests of the current generation of baby boomers that has immediate needs. Rather than raise tax rates, the government should first consider whether accumulating reserves and investing the nation's savings abroad would yield superior long-term returns compared to domestic re-investment, e.g., in Singapore's social and physical infrastructure.

2.4 RECOMMENDATIONS

To finance an ageing population, Singapore ought to reconsider its institutional framework that comprises four pillars: (a) the CPF system; (b) home ownership for retirement adequacy; (c) individual responsibility in health and long-term care, and (d) preservation and growth of reserves.

These pillars suited an era of baby boomers and rapid economic growth, but are less suitable for an era of population ageing, slowing economic growth and widening income disparities. The majority of recent retirees will lack retirement adequacy, as the cost of health and long-term care spirals upward. Their retirement savings are also subject to the vagaries of a volatile housing market. The rest of the population may be called upon to fund the ageing population through higher taxes.

All this suggests the need for the Singapore government to pursue more redistributive policies and to maintain a high level of investment in public goods (e.g., affordable housing and healthcare, better social protection against retirement and loss of income, investments in education and infrastructure). Only by remaking the social compact in a more egalitarian and inclusive fashion would all Singaporeans share in the benefits of economic growth. A remaking of the social compact could also moderate citizen opposition to immigrants and foreign workers.

***CPF: Retirement Top-ups and Grants***

Among lower-income Singaporeans (those in the bottom three or four deciles), the lack of retirement adequacy arises from the fact that their wages are quite low relative to cost of basic needs such that they are unable to accumulate sufficient savings for retirement over their working lives. For this group of older Singaporeans, policy will have to be finely balanced between providing more financial support and creating incentives for those who can work longer to do so. This requires a two-pronged approach.

First, for the “younger elderly” aged 55–65, the government could make up for part of the reduction in the employers’ CPF contributions. This will have the effect of encouraging older workers to continue working without raising costs on employers. This policy could be complemented by reform to make labour markets more flexible, which would encourage more working-age people to join the labour force.

Second, for Singaporeans above 65 who do not meet the CPF Minimum Sum, the study group proposes establishing a retirement grant that will enable these Singaporeans to participate in CPF LIFE. This grant could be pegged, for instance, at half the difference between the individual’s CPF savings and the Minimum Sum. This retirement grant will not create large unfunded liabilities, as it is likely that a higher proportion among future cohorts of retirees would attain the Minimum Sum. The fiscal costs of this grant could also be contained by limiting eligibility to the current elderly without the requisite retirement savings, thus building in a natural sunset provision on the grant. Both these factors help to ensure that fiscal burden of a basic retirement grant does not rise over time. The risks of moral hazard arising from such a retirement grant are also minimal since it is unlikely that working-age adults today would work less (and forego CPF savings) simply to qualify for the grant at retirement.

Retirement Adequacy: Increase Options to Monetise Housing

To help elderly Singaporeans meet their retirement needs, the government could create options to help unlock the value of housing assets, encourage the poor elderly to stay employed and help them boost retirement savings.

As the population ages, policies to encourage home ownership will have to be adjusted to enable Singaporeans to “decumulate”. At a minimum, the government should develop more monetisation options for the majority of older Singaporeans who own public housing. Developing a sizeable pool of rental options also makes more economic sense for a population that will shift from accumulating (housing) assets to *consuming* those assets.

Housing: Ensure Affordability and Housing Market Stability

Rather than conflate the goal of home ownership with that of asset appreciation, housing policy ought to emphasise housing affordability and price stability, in addition to offering options for households to consume housing, as outlined above.

The HDB should continue to provide *affordable housing for the majority of Singaporeans* as its primary mission. While improvements in the design of HDB flats are desirable, they should not come at the expense of affordability. To ensure affordability, the government should strive to keep the price of new HDB built-to-order (BTO) flats at or below three times the target group's annual income, and closely monitor income trends amongst the target groups. The group acknowledges that the HDB has focused on affordability as it has ramped up the supply of BTO flats in the past two years.

Health and Long-term Care: Balance Health and Long-term Care Funding and Focus on Productivity-led Growth

Singapore needs to sustain economic growth that is driven primarily by productivity improvements in order to cope with the escalation of costs for health and long-term care. Productivity-led growth, as opposed to labour force-driven growth, is the only sustainable way of raising incomes per capita. Only by raising incomes per capita can we afford the inexorably rising costs in healthcare without reducing our consumption of other goods and services. Baumol (2012), for instance, predicts that even though healthcare costs may rise alarmingly, they will remain affordable as long as labour productivity continues to grow at its historical rate of 2%. This productivity growth will mean that there would be much more to spend on everything else even if healthcare really did take up a bigger share of income.

Singapore also needs to guard against the possible knee-jerk policy reactions to escalating costs of health and long-term care. As healthcare costs rise, governments may respond by shifting more of the costs to patients, providers or private insurance in the hope that this would impose greater cost discipline in the system. Baumol argues this shifting of costs is misguided, as it will not cure the underlying disease. Even if public spending in healthcare is “unsustainable”, it is unclear how passing the costs and risks to citizens or providers makes it more sustainable. It is more likely that citizens, facing higher risk exposure, will cut back on necessary healthcare expenditure. Excessive rationing by the state could result in poorer health outcomes or more unequal access to good healthcare.

National Reserves: Review Constitutional Rules on Use of Reserves

To fund an ageing population and promote intergenerational equity, Singapore could increase the share of the investment returns on reserves that can be used by the current government — or more radically, set aside



part of our reserves for the baby-boomer generation. This change would alleviate the fiscal burden on the working-age population for the next 20 years, allowing them to consider parenthood decisions with less worry about supporting their own elderly parents. Equally important, it also provides a degree of certainty for the state, taxpayers, investors and retirees, allowing them to make their future consumption and investment decisions with greater confidence.

A likely objection to setting aside part of the reserves to fund the needs of the elderly is that this represents a raid on the reserves, which the current Constitutional rules on the protection for reserves are designed to forbid. This objection, however, ignores the fact that the rules on the use of reserves were formulated in the early 1990s, when Singapore was still generating large fiscal surpluses. The concern then was how to set aside sufficient resources to deal with future contingencies. It is timely and necessary for the government to review how the rules on the use of reserves should be adapted for a radically different context. In particular, the government should consider raising the share of investment returns that can be used by the current government *before* it contemplates tax increases.

In addition, the question of whether we need higher taxes cannot be properly addressed until the public has better information on national reserves and their expected future contributions to the national budget. While citizens probably do not need to know the exact amount of reserves that state holds, the government should minimally inform the public of whether it is utilising the full 50% of NIR that it is entitled to, as well as what it expects future NIR and the NIR contribution rate to be. Only with such information can citizens have an informed debate about whether increasing spending must be financed by higher taxes.

Fiscal Policy: Maintain Progressive Tax System and Introduce Efficient Taxes that do not Reduce Work Incentives

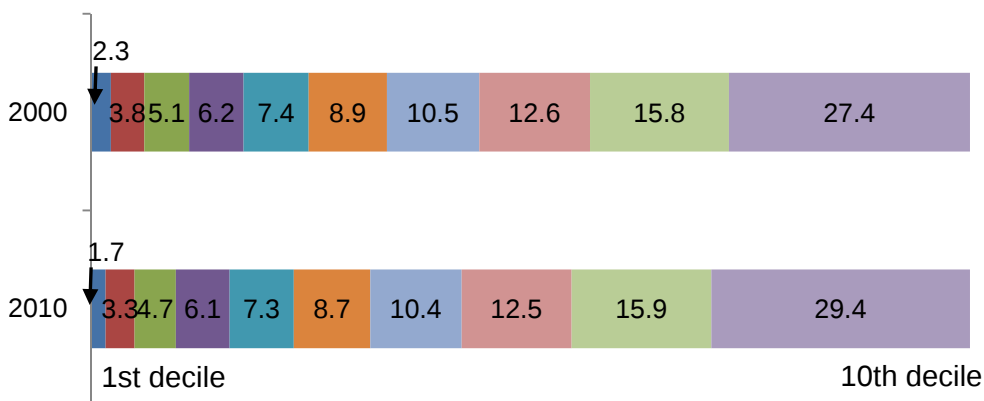
Certain groups are likely to bear the brunt of the impact of an ageing population, such as retirees without enough income or the poor who cannot afford rising healthcare costs. At a time when housing subsidies are likely to be insufficient as a redistribution tool, the government ought to consider addressing equity concerns by enhancing social safety nets.

Even if taxes have to be increased to finance an ageing population, rather than optimising the use of reserves, it is not apparent at all that the burden of tax increases should fall on citizens in the form of further GST increases. In the context of rising inequality and the fact that the very rich have been the main beneficiaries of income growth in the last decade (Figure 2.2), it would be equitable to raise progressive taxes rather than raise regressive



consumption taxes. Raising progressive taxes could take the form of introducing a capital gains tax, which is also an efficient tax since it does not reduce work incentives; having a more progressive property tax system; or raising the top marginal tax rate on personal incomes.

Figure 2.2. Shares of total income by decile, 2000 and 2010



Source: Key Household Income Trends 2012, Department of Statistics, http://www.singstat.gov.sg/Publications/publications_and_papers/household_income_and_expenditure/pp-s19.pdf.

The rising costs of healthcare are likely to hit the poor harder than the rich, offering yet another reason for more vigorous redistribution by the state. If the poor indeed cannot afford health and long-term care, it is incumbent on the state to redistribute the gains of productivity growth more aggressively so that there is equitable access to good healthcare.



2.5 REFERENCES

- Baumol, W. J. 2012. *The Cost Disease: Why Computers Get Cheaper and Health Care Doesn't*. Connecticut: Yale University Press.
- Bloom, D. E. and D. Canning. 2008. "Global Demographic Change: Dimensions and Economic Significance". In A. Prskawetz, D. E. Bloom, and W. Lutz (eds.), *Population Aging, Human Capital Accumulation and Productivity Growth, Population and Development Review*, a supplement to *Population and Development Review* vol. 33, Population Council, New York, 2008.
- Bloom, D. E., D. Canning and G. Fink. 2011. "Implications of Population Aging for Economic Growth", Program on the Global Demography of Aging, *PGDA Working Paper No. 64*.
- Bloom, D. E., D. Canning and P. Malaney. 2000. "Demographic change and economic growth in Asia", *Population and Development Review* 26(Supp): 257–290.
- Bloom, D. E. and J. G. Williamson. 1998. "Demographic transitions and economic miracles in emerging Asia", *World Bank Economic Review* 12: 419-456.
- Borsch-Supan, A. H. 2008. "The Impacts of Global Aging on Labor, Product, and Capital Markets". In A. Prskawetz, D. E. Bloom and W. Lutz (eds.), *Population Aging, Human Capital Accumulation and Productivity Growth, Population and Development Review*, a supplement to *Population and Development Review* 33, Population Council, New York.
- Chia, N. C. and A. Tsui. 2012. "Adequacy of Singapore's Central Provident Fund Payouts: Income Replacement Rates of Entrant Workers". Study commissioned by the Singapore Ministry of Manpower. <http://www.mom.gov.sg/Documents/retirement-income-adequacy/Occasional-Paper-CPF-IRR.pdf>.
- Costa, D. L. 1998. "The Evolution of Retirement: An American Economic History, 1880–1990." National Bureau of Economic Research Series on Long-term Factors in Economic Development. Chicago: University of Chicago Press.
- Feyrer, J. 2008. "Aggregate Evidence on the Link Between Age Structure and Productivity," in A. Prskawetz, D.E. Bloom and W. Lutz (eds.), *Population Aging, Human Capital Accumulation and Productivity Growth*,



Population and Development Review, a supplement to *Population and Development Review* vol. 33, Population Council, New York.

Fogel, R. W. 1994. "Economic growth, population theory, and physiology: the bearing of long-term processes on the making of economic policy". *American Economic Review* 84: 369–95.

Fogel, R. W. 1997. "New findings on secular trends in nutrition and mortality: Some implications for population theory". In M. Rosenzweig and O. Stark (eds.), *Handbook of Population and Family Economics* 1A. Amsterdam: Elsevier.

Glaeser, E. L. and M. Resseger. 2009. "The Complementarity between Cities and Skills", *Journal of Regional Science* 50(1): 221–44. <http://dx.doi.org/10.1111/j.1467-9787.2009.00635.x>.

Gruber, J. and D. Wise. 1998. "Social Security and Retirement: An International Comparison," *The American Economic Review* 88 (2), Papers and Proceedings of the Hundred and Tenth Annual Meeting of the American Economic Association, 158–63.

Lee, R. D. and D. S. Reher. 2011. "Introduction: The Landscape of Demographic Transition and Its Aftermath". In R. D. Lee and D. S. Reher (eds.), *Demographic Transition and Its Consequences*. Population and Development Review, a supplement to Volume 37.

Lindert, P. 2004. *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century*. Cambridge: Cambridge University Press.

Liu, Z. and M. M. Spiegel. 2011. "Boomer Retirement: Headwinds for U.S. Equity Markets?" Federal Reserve Bank of San Francisco Economic Letter, 22 August. <http://www.frbsf.org/publications/economics/letter/2011/el2011-26.html>.

Mason, A. 2001. "Population, Capital, and Labor". In Mason, A. (ed.), *Population Change and Economic Development in East Asia: Challenges Met, Opportunities Seized*. Stanford: Stanford University Press.

Mathers, C. D., R. Sadana, J. A. Salomon, C. J. Murray, and A.D. Lopez. 2001. "Healthy life expectancy in 191 countries, 1999." *The Lancet* 357(9269): 1685–91.



- Ministry of Social and Family Development (MSF). 2013. *National Survey of Senior Citizens 2011*. IPS Report Commissioned by Elderly and Disability Group. Singapore: MSF.
- OECD. 2011. *Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries*. http://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2011_pension_glance-2011-en.
- OECD. 2012. *Pensions at a Glance Asia/Pacific 2011*. http://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-asia-pacific-2011_9789264107007-en.
- Rajan, R. 2010. *Fault Lines: How Hidden Fractures Still Threaten the World Economy*. New Jersey: Princeton University Press.
- The Economist*. 2012. "The next crisis: Sponging boomers." Finance and Economics, 29 September, print edition.
- Yap, M. T. 2009. *State of the Elderly in Singapore 2008/2009*. Report commissioned by the Ministry of Community, Youth and Sports. Singapore: MCYS.





Chapter 3

Labour



CHAPTER 3: LABOUR

3.1 TERMS OF REFERENCE

Within the context of an ageing and shrinking resident population and workforce, this chapter considers:

- Relevant human capital policies for good job growth and prosperity;
- Ways in which labour force productivity and real wages could be raised;
- Optimal level of immigration, or foreign worker inflow, and total population size in 2050, given a shrinking domestic population;
- Ways in which negative externalities of a growth strategy that relies on foreign worker inflows and immigration could be lowered;
- Policies to balance the need for migrants and foreign workers against inequality, job competition and a shrinking population;
- Appropriate mix of skills for development as a knowledge-based economy, given negative population trends;
- Appropriate social policies for the future, given negative population and economic trends.

3.2 BACKGROUND

Three forces will buffet the Singapore labour force, i.e., the number of people who seek jobs:

- 1) The population will age and population policies can only slow or hasten ageing (as can be seen in Scenarios 1, 2 and 3 of IPS' population projections).
- 2) Even with modest workforce growth rates relative to history, Singapore's total population could easily reach levels that threaten social well-being, cohesion and national identity (the Prime Minister's call for a long-term population level of "significantly below 6.9 million"¹ thus seems like an appropriate long-term population limit).
- 3) Economic volatility and income inequality will rise in Singapore from the effects of globalisation and technological change.

Besides a shrinking labour force, these factors could also result in a higher rate of structural and cyclical unemployment, financial hardship for ageing low-income workers, and major adjustment difficulties for domestic small and medium enterprises (SMEs).

1. Singapore Parliamentary Reports, 8 February 2013. Vol 90, Session 1, Sitting 6.



Population Ageing

The elderly will form a bigger share of the population even if Singapore were to raise fertility, increase naturalisation rates and let in more foreign workers. Population policy changes can only hasten or slow this trend. The IPS population scenarios show that the number of citizens and Permanent Residents will start to fall from 2020, and the share of elderly in the resident population will rise further. Both trends will shrink the labour force and leave fewer people of working age to support more old people.

Furthermore, in the coming decades, the elderly poor will be those baby boomers (particularly the early baby boomers) who have had low wages most of their working lives and limited education. Retirement adequacy and the affordability of medical and long-term elderly care for this vulnerable population cohort will become increasingly critical issues.

Economic Volatility and Income Inequality

These adverse demographic trends will coincide with more frequent economic boom-and-bust cycles, as a result of global economic imbalances. As technological changes and globalisation impact Singapore's economy, wage growth in certain income segments may continue to be constrained whilst income inequality widens. Indian and Chinese workers have joined the world labour market, depressing median wages in developed countries. Technology has made repetitive mid-level jobs redundant, such as clerical work and professional jobs that can be outsourced.

Economic Restructuring

Due to globalisation and technological change, Singapore will have to restructure its economy and move away from labour-intensive growth towards higher levels of productivity and wages, especially in blue-collar occupations. After two decades of liberal unskilled and semi-skilled immigration, real wages and productivity growth have lagged developed country averages. Economic restructuring will involve a much lower rate of labour-force growth and immigration over the coming decades, which will re-allocate labour away from labour-intensive activities towards more capital-, skill- and technology-intensive activities. This will involve a sustained process of "creative destruction", i.e., re-organisation, relocation or closure of existing firms and the birth and consolidation of new firms and industries.

Joblessness, Vulnerability and Business Difficulties



These forces are likely to result in a higher on-going rate of structural, cyclical and transitional unemployment, economic and financial hardship for ageing low-income workers as well as major adjustment difficulties and challenges for SMEs. Singapore thus needs to:

- 1) Balance immigration by having sufficient immigrants to maintain the labour force and economic growth on the one hand, but not so many as to threaten social and national well-being. This challenge entails recalibrating immigration and population policy in order to hit an optimal rate of labour force growth and a reasonable terminal population size.
- 2) Strengthen manpower, education and industrial policy to ensure economic restructuring. To facilitate restructuring, Singapore needs to increase the productivity and adaptability of the labour force; raise the capability of domestic businesses in employing the labour force; and revamp the educational and continuing education system to provide for innovation-centred and life-long learning.
- 3) Strengthen social policy to soften the impact of higher economic volatility and the inevitable labour force disruptions from restructuring. A stronger social policy involves strengthening and enhancing safety nets for the aged and the vulnerable in the labour force.

3.3 ANALYSIS

An ageing population, combined with a total fertility rate (TFR) that is markedly below the replacement level, will ultimately result in a shrinking labour force. It will leave fewer economically active people to pay taxes and support the elderly.

How can the size of the labour force be maintained? The labour force is determined by the size of the working-age population and the percentage of it seeking jobs. Singapore can therefore maintain the labour force through two major routes: 1) encourage a higher percentage of working-age people to seek jobs (increasing the labour force participation rate), or 2) raise the size of the labour force by raising the retirement age, raising the TFR, or raising immigration and naturalisation and/or by importing foreign labour.

Singapore has relied on immigration, naturalisation and importing foreign labour (or foreign manpower) in the past two decades to mitigate the impact of the ageing population. In the coming decades, the core challenge will be to strike a balance among the four tools to curb the labour force decline, rather than rely excessively on in-migration, which can create unintended social costs.



One way to maintain the labour force is to encourage more working-age people to obtain employment. The participation of women in the labour force in Singapore merits attention: Singaporean women are increasingly better educated, but many stop working after giving birth; by contrast, women in other developed economies often return to work after raising children. Since the labour force participation rate for men is already high and Singaporean workers work long hours, there are limits to how much overall labour force participation rates could rise. Still, some 120,000 additional workers could potentially participate in the labour force in the next 10 years. Singapore should encourage women to re-enter the labour force, while recognising the non-pecuniary benefits of bearing and raising children.

Although it is hard to raise the TFR, it is not impossible. Countries like France and some of the Nordic countries have raised the TFR by 0.3–0.5 percentage points over a decade, through concerted pro-natal and family-friendly policies. These policies include high-quality and affordable state-provided childcare facilities, higher hourly real wages and adequate part-time work arrangements for women. They are eminently possible over the medium to long term.

The literature is more optimistic with respect to the retirement age. Leading Austrian demographer Wolfgang Lutz has shown in detailed empirical studies that in ageing populations in Northern Europe where education levels are high, there is a natural extension of retirement ages by the better educated towards 65–70 years. This trend could make a sizeable difference in increasing the skilled labour force available for economic growth without having to resort to excessive skilled immigration (Lutz 2013).²

Higher in-migration and naturalisation can slow the rate of population ageing and the decline in the labour force, but could also in turn lead to higher social, economic and political costs. Social costs include higher property prices; crowdedness in education, health and public recreational facilities; reduced social well-being amongst residents; weaker social cohesion and national identity; or even a rise in social conflict and xenophobia (see Chapter 7). Current rates of in-migration and naturalisation are reaching social and political limits.

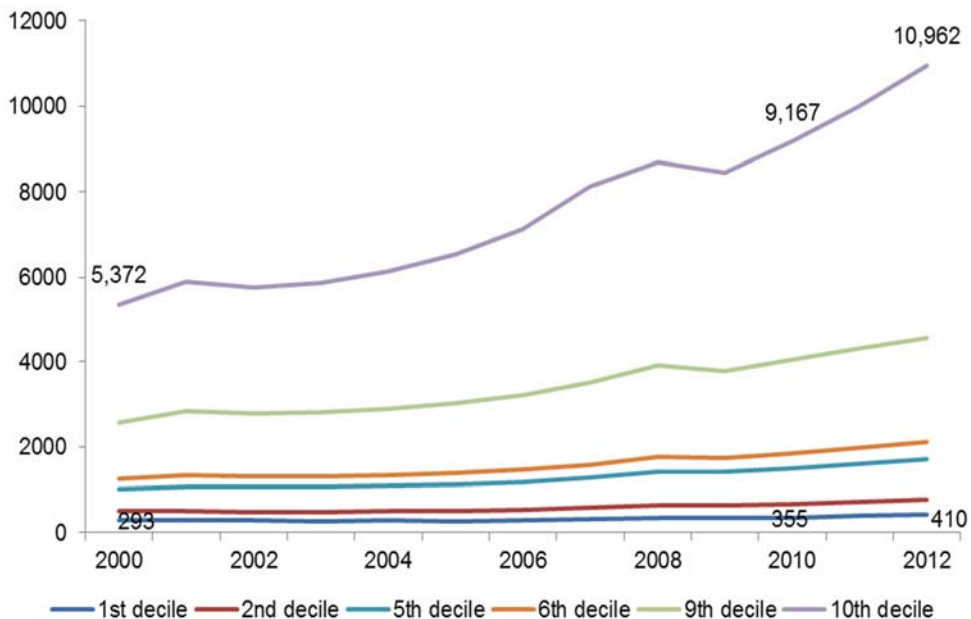
A liberal and un-calibrated policy of foreign labour intake can also depress wages and productivity across various occupations. The intake of more than one million work permit and S pass holders relative to a domestic labour force of two million over the last 20 years have contributed to a dampening effect on real wages for the bottom 20% of income earners.

2. For a more complete study, see A. Prskawetz et al (2005).



Real wages in Singapore for blue-collar occupations are lower than in other developed countries like Australia, Hong Kong and the United States (US). Between 1987 and 2010, the estimated real monthly income of the bottom 20% of employed residents fell around 8%. This was combined with widening income inequality. The average monthly household income from work per household member among the bottom 10% of resident households by income rose at an average annual rate of 1.9% between 2000 and 2010, as compared with 5.5% average annual growth for the top 10% of resident households by income in the same period (Figure 3.1).

Figure 3.1. Average monthly household income from work per household member among resident employed households, by deciles and excluding employer CPF contributions, 2000–2012



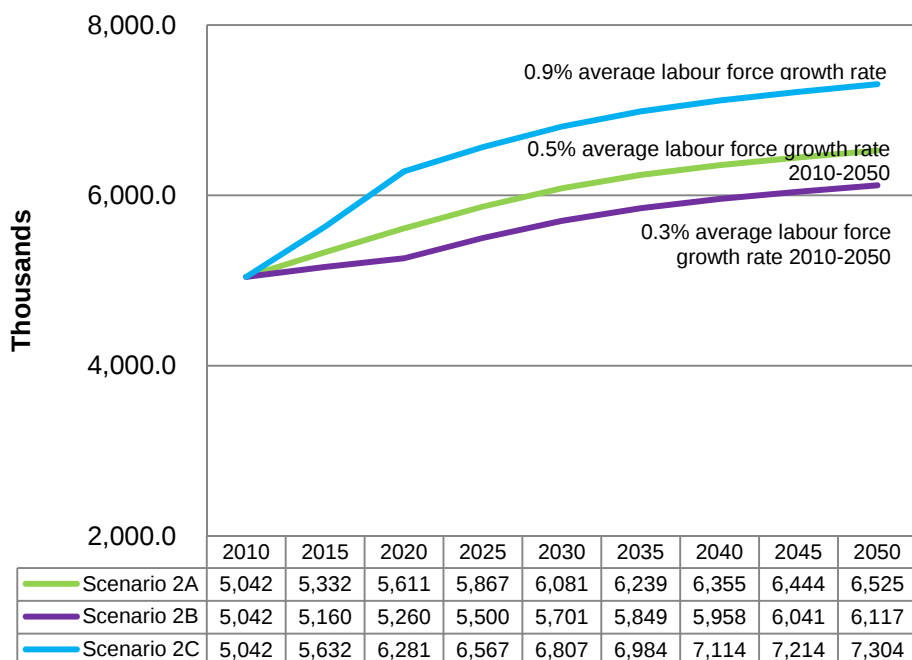
Source: Key Household Income Trends, 2012. Department of Statistics, 2013

Massive immigration and naturalisation could in turn hurt the returns on education for citizens, potentially reducing investment in domestic human capital, reducing social mobility for citizens and fuelling further social dissatisfaction among citizens.

The huge increase in the population over the last 20 years, moreover, has created a larger base that can magnify the impact of a low labour force growth rate. Even if the labour force grows at an average rate of 1.3% yearly

from 2010–2050 (significantly slower than 3.5% yearly over the last 20 years), the total population could rise to 7.3 million by 2050 (under the assumptions used in Scenario 2C in IPS' population projections). On the other hand, more modest growth rates of say 0.7% per annum, if sustained, could result in a total population size of 6.5 million by 2050 (in Scenario 2A, Figure 3.2).

Figure 3.2. Total population projections to 2050 at different labour force growth rates (with constant LFPR, TFR and naturalisation rates)



Note: LFPR = Labour force participation rate

Source: IPS Population Projections Scenarios 2A-C.

Growth of the labour force through the importation of foreign labour has tended to outpace expectations and targets because:

- 1) The rate of such foreign labour migration is currently determined largely by industry demand, subject to taxes on foreign labour and ratios of locals to foreigners hired. A rapid, sustained expansion in labour-intensive final demand, like construction or hospitality, can lead to an unexpected surge in immigration, as in the latter-half of the 2000s.
- 2) Governments have a tendency to “go for growth” in the short term by allowing more immigrants and labour supply to satisfy the cyclical demand for prosperity, but fail to consider the much longer-term



structural impact of a significantly higher population on well-being, social cohesion and national identity.

- 3) Policy has focused on immigration and naturalisation, which allows new citizens and PRs to bring along dependents and expand the population. By contrast, single-person immigrants, e.g., S pass or employment pass holders, are either unable to or less likely to bring along dependents. A shift towards single-person immigrants, even at higher skill levels currently associated with employment pass or permanent residency, who eventually leave Singapore, can help experienced locals rise to senior positions when immigrants leave.

As elaborated further in this section, labour productivity — the determinant of long-term real wages and economic growth — could grow 2–3% as labour force growth slows to 0.5–1.0% a year through 2020. Labour productivity could still rise 2% yearly with labour force growth of 0.0–0.5% in the following 10 years. These rates reflect the mixed impact of labour force growth on labour productivity and the experience of the US and Europe.

The impact of labour force growth on labour productivity has been mixed. On the one hand, macroeconomic studies often show that productivity growth is inversely related to labour force growth. Labour shortages lead to higher wages and prompt businesses to boost productivity through mechanisation, technology, re-organisation and shifting towards higher value-added products or services. This trend was the experience of middle-income countries that became advanced economies. On the other hand, more recent studies from the US and Europe have shown that modest immigration augmentation could boost total factor productivity and innovation by increasing specialisation, especially for highly skilled labour in science and engineering.

The US experience also tends to show that immigration lowers wages for native workers who compete with immigrants for jobs and lowers the price of labour intensive services. Both sets of studies suggest slower or faster growth of the labour force itself need not imply slower or faster productivity growth. Therefore, the type of immigration matters (Cavelaars 2004; Hanson 2011).

The experience of the US and Europe suggest moderate productivity growth is possible as labour force growth slows. From the 1970s till the mid-1990s, yearly labour force growth in Europe averaged around 0–0.5%, whereas productivity growth averaged 1.5–2%. From 1990 to 2005 in the US, yearly labour force growth was around 1% as productivity growth, powered by the



info-communications revolution, and averaged 2–2.5% (Jorgenson et al. 2004).

Productivity in Singapore could outpace what Europe and the United States experienced for three reasons. First, labour and product markets in Singapore are more flexible than in Europe during the 1970s. Second, Singapore benefits from being an economic hub with network externalities, effective information and communication, active promotion of research and development (R&D) and unusually high rates of foreign investment. Third, Singapore has considerable room for catch-up through 2020, given productivity levels in construction, services and manufacturing in Singapore are around 38%, 58% and 62% of the US averages, respectively, despite a higher GDP per capita. Slower labour force growth rate in Singapore, around the pace of the US and Europe, would entail lower immigration rates. It would force businesses to “get off steroids” and stop relying on cheap foreign workers, while maintaining comparable rates of productivity growth (Thangavelu 2012).³

Labour force growth of around 1% till 2020 and 0.5% till 2030 is likely to result in a total population of around six million by 2030. By then, the resident labour force would be declining, but the adverse effects of a smaller working-age resident population could be mitigated by a calibrated immigration and naturalisation policy as well as higher TFR, LFPR and retirement age. The combined effect may be to stabilise to population between 6–6.5 million by 2050.

The study group understands that a period of transition from historically higher rates of labour force growth may be necessary to allow domestic SMEs to adapt to lower rates of foreign labour intake. This transition matters because SMEs employ nine out of 10 workers in Singapore and are the backbone of domestic industrial capacity. It also matters because the mismatch between the types of workers available and the types businesses need is more likely in Singapore, given the small size of the country. The transition period is also intended to mitigate the risk of spiralling inflation as labour supply slows markedly.

More Productive and Adaptive Labour Force

3. Thangavelu (2012) provides a model for the relationship between the capital stock, immigration and productivity growth with empirical analysis indicating excessive immigration lowers the capital labour ratio and long term potential growth rate in Singapore.



Singapore needs to boost the productivity of its labour force. Economic resources measured by GDP per capita, real wages and social well-being can still grow even if the labour force shrinks but becomes more productive.⁴ The need for productivity will grow as Singapore faces stiffer competition from major Asian economies moving up the middle- to high-income ladder. Long-run labour productivity and maintaining Singapore's comparative advantage as a knowledge-based business and industrial hub will depend critically on the type of education and training that median members of the domestic labour force have.

Singapore's status as a high valued-added Asian regional hub confers advantages that raise overall productivity in the context of a platform servicing a varied and rapidly growing Asia. Singapore's position as a regional or global hub creates significant positive network externalities that are based on knowledge, connectivity and human capital. It is imperative for Singapore to protect and reinforce its hub status, and an adequate supply of highly educated and skilled manpower is probably one of the single most important ingredients in maintaining and growing this Asian hub status.

Singapore also needs a more adaptive labour force to cope with rapid structural changes. Industries in Singapore, for instance, could shift towards financial services away from hard-disk manufacturing, or use robots to replace assembly workers and personal productivity software to replace secretaries. As these changes occur more frequently, an adaptive labour force will be able to perform new tasks that generate more value more efficiently, boosting productivity.

Although Singapore students often top global charts for science and mathematics achievement, and local universities have climbed the international rankings, there is anecdotal evidence of a mismatch between what businesses seek in their employees and what Singapore's labour force offers. This gulf is likely to widen in a knowledge-intensive and fast-changing economy, which will prize adaptive workers who can anticipate and solve problems, have the confidence, training and ability to promote fresh ideas and offer differentiated thinking. By contrast, the Singapore education system nurtures high test scorers who are risk-averse and conventional.⁵

4. Germany, for instance, has the oldest population among developed countries. Its population has been shrinking, but it remains the most dynamic high value-added exporting economy in the world with one of the most productive labour forces and one of the highest standards of living in Europe.

5. See Lim (2013) on competitive labour market dynamics and education, and Ng (2007) for a survey of the impact of educational streaming on social mobility.



Table 3.1. Mismatch between what employers value and what Singapore employees offer

Employers will seek people who...	Labour force offers people who...
Can identify, frame and solve problems	Can execute if told the problem and solution
Are enterprising and innovative	Are risk-averse and conventional
Are open-minded and culturally flexible	Are provincial and think in silos
Are street smart and practical	Are book-smart and excel in tests

Source: POS2050 Labour Study Group

This mismatch helps explain why several major employers say they need to hire foreigners, rather than Singaporeans, because the latter fall short of global standards. In the local or global job market, Singaporeans with better grades and learned competencies may lose out to foreigners with inferior paper qualifications. The latter may end up being better workers than more academically oriented Singaporean workers as they may be more “savvy” and “street-smart”, and may have more entrepreneurial mind-sets.

This gap has developed due to several reasons:

- 1) The education system is oriented towards standardised examinations and results, so it tends to produce workers better at academic, hierarchical, specialised thinking and who are more risk-averse. For example, economics graduates from the Singapore Management University who are trained with more participative teaching methods and evaluation systems command a premium over their counterparts from the Nanyang Technological University and National University of Singapore. Similarly, headhunters regularly report higher premiums offered to foreign executives compared to locals of equivalent experience, and managers in knowledge-based industries complain that local graduates are not as able to perform as well as foreign graduates.
- 2) Nearly all employers who mention Singaporeans’ uniformity/conformity of thought (compared with other nationalities in the labour market) attribute it to “the educational system”, which is (a) heavily focused on narrow “teaching-to-the-test” skills from a very young age; (b) highly tiered, with screening of students for academic ability beginning with the Primary School Leaving Examination (PSLE) at ages 11–12 and continuing through the teenage years; (c) heavily dependent on private tuition which many schoolchildren undertake; and (d) increasingly ineffective as a channel of upward social and economic mobility (given



“streaming” by ability, unequal distribution of state and private resources, and the varied cost of tuition).

- 3) The government has made considerable investments into the education system. However, these investments in education are mainly suited to an earlier “pre-knowledge” economy era, where industry needs were more structured and predictable. A low teacher-pupil ratio and a highly streamed education system with exacting examination standards have produced a massive shadow education system — tuition centres that focus on teaching students to do well in examinations rather than to solve problems or learn, raising issues of both relevance to performance in a knowledge-based economy as well as social mobility and equity. To move up international rankings, the universities in Singapore have increasingly focused on research that, by nature, is specialised. This focus on research may not necessarily benefit students, who need broad knowledge and the capacity to gain and apply new skills.

Beyond the education and training of new workers, the stock of workers in the labour force needs to be systematically enhanced by continuing education and training as well as life-long learning programmes that make it convenient and affordable for workers to upgrade their skills or deepen training and development.

Domestic Business Capability

Besides making the labour force more productive, Singapore can also prepare for an ageing population and intensified change by raising overall corporate productivity. It must encourage businesses to expand into segments that generate more value, and reinforce Singapore's status as a regional hub — a status that confers durable comparative advantage in trade and business opportunities.

Although Singapore is generally business-friendly, its support for SMEs may be inadequate to permit SMEs to cope with many current challenges, including those arising from tightened labour supply. This takes the form of numerous disparate and uncoordinated programmes that require too much time and effort for SMEs to access. While there are many agencies and government programmes established to help the SME sector, there are gaps between the various agencies functions through which many SMEs may fall.

These shortcomings will hinder SMEs in making the move up the value chain — to go from relying heavily on cheap labour to provide low-value goods and services to delivering greater value in innovative products and services. As labour becomes scarce, SMEs will tend to be hollowed out relative to foreign



and larger firms that are better equipped in bidding for and retaining labour. The government should thus strengthen and improve assistance to SMEs to make these important transitions and preserve our strategically important domestic business capability.

Vulnerable Social Groups

Despite efforts to create a more adaptive labour force and smoothen business transitions, certain groups that are less able to adapt are likely to become vulnerable, as the population ages and the economy becomes more volatile. More frequent economic restructuring and business cycles imply that both cyclical and structural unemployment are likely to rise in the future. In the region, after Hong Kong, Singapore will age most rapidly from now till 2050 (United Nations Department of Economic and Social Affairs Population Division 2012). The old-age dependency ratio will rise from 13.0 to 58.7 (Scenario 1). By 2050, three out of every 10 residents will be over the age of 65 even in IPS' most optimistic assumptions for resident TFR (Scenario 3).

Since a significant number of the near-elderly — the post-war baby boomers — are less educated and earn below-average incomes, many may not be able to meet their health and retirement needs in the coming decades, especially if they lose their jobs in coming years amid continual economic restructuring. In Singapore, 300,000 to 400,000 such older, less educated low-income workers risk losing jobs, because they will likely take more time to learn new skills for new industries as old industries move elsewhere.⁶ Women in this age group are likely to be vulnerable, get lower retirement income because many stopped working to raise children, and therefore have lower CPF savings. They are also likely to outlive their husbands. The baby boomers and elderly women are thus likely to form a group of particularly vulnerable people who, for social justice reasons, cannot be ignored.

Other countries have confronted the deterioration in old-age dependency ratios and potential support ratios over longer time-frames and have had more time to adapt. Many advanced economies with potential support ratios⁷ of around 3.5-4.5 in 2010 are preparing for significant ageing of their populations and further declines in the potential support ratios to around 2.0–2.2 by 2050, according to *World Population Prospects: The 2012 Revision* (United Nations Department of Economic and Social Affairs Population

6. For empirical research on vulnerable older population groups and their key characteristics, see Yeoh et al (2010).

7. The potential support ratio is the number of persons aged 15 to 64 per every person aged 65 or older.



Division 2012). For Singapore, the key question is which new institutional arrangements in the labour market and social safety net or social security policy can most effectively deal with such a natural population ageing process.

3.4 RECOMMENDATIONS

Singapore needs to cope with and take advantage of the forces of change—population ageing, rising economic volatility and the growing need for economic restructuring. The study group proposes that Singapore:

- Focuses on improving social well-being — the well-being of citizens — by using per capita GDP, real wage, family income and productivity growth (rather than GDP growth) as its main performance indicators.
- Mitigates the trend of a declining labour force and targets labour force growth of 1% a year till 2020 and 0.5% a year thereafter.
- Meets the labour force growth target using a range of tools, including raising the TFR, the retirement age and women's participation in the labour, rather than rely too heavily on naturalisation and immigration.
- Raises the productivity and adaptability of its median worker by investing more money and restructuring the formal education system and by promoting lifelong learning, in order to benefit from technological change and the rise of Asia.
- Simplifies aid, which a new agency with the resources, influence and inter-agency co-ordination ability of the Economic Development Board could co-ordinate, to help domestic SMEs adapt to labour scarcity and the new economy, and considers direct financing of promising SMEs.
- Strengthens its social safety net, including introducing unemployment insurance, raising Workfare Income Supplement markedly to help the increasing number of ageing, unskilled and relatively poor workers who will need to find more jobs and fund retirements in the coming wave of baby-boomer retirees. This would help them with saving and living costs. Grants should be offered to poor retirees. Key social policies like public housing, healthcare and retirement adequacy also need to be strengthened (see



recommendations by the Social Infrastructure Development and Capital study groups).

These recommendations are elaborated further below:

Set Productivity and Social Well-being as Main Goals

To sharpen the focus on productivity, Singapore ought to use per capita GDP as the broadest key performance indicator, rather than on GDP itself, because productivity drives and reflects per capita GDP growth in the long run. Per capita GDP is also a better reflection of quality of life as well as productive resources per citizen. Ultimately it is productivity growth that drives real standards of living, enables real wage growth and underpins competitiveness and innovation.

Target Labour Force Growth of 0.5–1.0% through 2020, and 0.5% After

Singapore ought to set a target of expanding the labour force by 0.5–1% yearly through 2020 and by 0.5% or lower thereafter. The faster growth rate through 2020 is intended to give local SMEs time to adjust, thus preventing a hollowing out of domestic business capability. The slower growth rate after 2020 is in line with that in Europe and the US.

Such a labour force growth trajectory, if combined with TFR and labour force participation rate (LFPR) improvements could put the total population on a trajectory to around 6 million by 2030 and 6.5 million by 2050, from 5.3 million now. Such long-term population levels should be taken as serious target limits for policy.

Recalibrate Naturalisation, Foreign Manpower and Population Policies

To meet this labour force growth target, Singapore needs to use the full set of policy tools, shifting away from its current reliance on labour importation and naturalisation. Besides the above, this toolbox also includes redoubled efforts to raise the TFR, the LFPR (especially for women) and the retirement age. Progress in each area will be gradual and limited. Cumulatively they could make a significant difference in slowing the labour force decline.

In foreign manpower and naturalisation, moreover, Singapore could mitigate the tendency to overshoot targets, which raises the risk of undesired population growth given population size is sensitive to labour force growth. Singapore could also shift foreign manpower policy away from naturalisation. In short, the study group proposes that Singapore:



- Adopts a framework of setting the rate of foreign manpower (or labour migration) and naturalisation through clear, relatively fixed and publicly auditable annual quotas. These quotas ought to be consistent with reasonable rates of labour force growth and optimal population size, as in most OECD countries — even those, like the US, Canada and Australia, with relatively liberal immigration policies. This revamp would replace the current framework, which is driven by industry demand. Immigration and naturalisation tends to overshoot targets substantially under the current framework.
- Reviews the inflow and stock of permanent residents (PRs), because PRs bring with them dependents, whereas single-person immigrant passes like S pass holders do not. The dependents of PRs compete with citizens for subsidised healthcare, education and housing. Single-person immigrant passes should be considered more widely even for higher skill and income levels, whilst PR and new citizenship applications should be approved less freely and only after many years of naturalisation and proven value to the local economy and society.
- Regularly reviews the annual intake of new citizens in conjunction with measures of social cohesion and integration rather than as a result of economic imperatives, with priority given to the foreign spouses of Singaporean citizens.

Invest in Education for a Productive and Adaptive Labour Force

To benefit from technological change and the rise of Asia, Singapore should raise the productivity and adaptive capacity of its median worker by investing more money and more broadly in the formal education system and by promoting lifelong learning. The study group proposes that:

- The education system refocuses on developing a median student who can better perform in the creative, open-ended problem-solving work environment that characterises the knowledge-based economy. This shift away from rote learning for examinations will help Singaporeans find jobs in new industries as old industries close or move elsewhere. It will strengthen the long-term fundamentals to boost the productivity of the labour force and to maintain Singapore's key status as a dynamic knowledge-based hub economy in Asia.



- The government invests more in education as Singapore moves into a knowledge economy. By providing more funds and cutting the teacher-to-pupil ratio, the government will enable each teacher to cater to different students and improve learning. It may be argued that better teachers — not more teachers — improve learning, but when the quality of teachers is constant, an increase in the number of teachers is likely to improve learning significantly, especially in students' abilities in framing and solving problems.⁸
- Singapore re-examines streaming. Which kind of school system will enable Singaporeans to continually learn new skills: one that categorises students into different vocations at an early age or one that emphasises general education for all? Finland exemplifies an emphasis on general education: It offers comprehensive education for all students until 16 years old, because it wishes to nurture in citizens the capacity to learn new skills and cope with accelerating change. Although Germany streams students, it does so later than Singapore (at 14 years) and allows vocational students to become highly qualified experts, e.g., master carpenters, helping vocational students to earn high wages and supporting its economic model, such as engineering excellence, best-in-niche SMEs, etc.⁹

Besides changes to the formal school system, the government should continue enhancing incentives and support for lifelong learning so workers can continually meet industry needs. In this respect, the study group proposes that it could:

- Intersperse formal learning throughout life, to promote lifelong learning and adaptability. Singaporeans now go to school till they are 25 years old (for men) and 23 years old (for women), then work for the rest of their lives. Instead, they should be given opportunities return to school over the course of their longer working careers to pick up new skills and knowledge after starting work, with customised

8. See Fredriksson et al (2013), which evaluates the long-term effects of class size in primary school. It uses rich data from Sweden and exploited variations in class size created by a maximum class size rule. Smaller classes in the last three years of primary school (ages 10 to 13) are beneficial for cognitive and non-cognitive ability at age 13, and improve achievement at age 16. Most important, the study finds smaller classes have positive effects on completed education, wages, and earnings at ages 27 to 42. The estimated wage effect was large enough to pass a cost-benefit test.

9. See Estevez-Abe (2012) for a comparison of Finnish and German education systems and their long-term impact on productivity and wages in a globalised knowledge economy.



and flexible cycling through the formal or informal education system at various points of their working life depending on the needs of both employees and employers.

- Encourage companies based in Singapore to send local employees to work in the region and pick up familiarity with regional cultures. Regional companies could send staff from the region to work temporarily in Singapore, so local staff develop familiarity with the region. Both moves would nurture the human capital to buttress Singapore's hub status.
- Re-evaluate continuing professional education. The need for continuing education is great for people currently in their late 40s or 50s, because many of them did not go to university. As the educational profile of the population improves, it may help more to offer alternative career training and education and develop employment insurance, by lubricating the transition between jobs in different industries. When complemented by greater public provision of services, such as childcare, professional education programmes can also encourage women to return to the labour force. The study group also supports the Social Infrastructure Development study group's recommendations to strengthen the Continuing Education and Training (CET) system by building, broadening and lengthening educational pathways as described by Raffe (2003).

Employers also have a role to play in nurturing human capital. In Germany, for instance, unions help develop school curricula. Although companies ought to nurture in staff the capacity to learn, they may also fear losing trained staff. In Singapore's case, government-linked companies could spearhead developing skills and talent; even if they lose their trained staff, such skills development would nevertheless benefit Singaporeans' human capital.

Strengthen Support for SMEs in Transition

To help domestic SMEs adapt to labour scarcity and the new economy, Singapore ought to simplify aid, which a new agency similar to the Economic Development Board could coordinate, and to consider direct financing of promising SMEs. The study group therefore recommends that:

- To help SMEs cope with faster and more frequent economic restructuring, Singapore ought to simplify and co-ordinate government support for SMEs to prevent them from falling through the cracks of uncoordinated programmes. In particular,



the government could aggregate various upgrading support services, including human resources, regulatory support and accounting. SMEs cannot afford and do not have the necessary corporate and administrative functions compared with MNCs or larger firms, and this is one area where the government could help to relieve the burden. It could also set up or encourage the establishment of virtual or physical centres to provide back-office functions such as accounting, IT support and staff training to a cluster of domestic SMEs.

- To further help grow the next generation of SMEs needed to develop domestic capability, Singapore should consider supporting SMEs at various stages during the entire SME financing cycle from start-up to venture and growth capital, including moves to a private equity-like model with financing through loans and working capital funding as well as assistance on management upgrading. Business solutions that can be provided by the private sector should not be the domain of the state, but they can be seeded with state support that is willing to take some capital risks. State sponsorship for gaps in R&D, start up and venture funding should be carefully studied and expanded.
- Given the massive, sustained upgrading needed over the next decade, an agency with the size, clout, inter-agency co-ordination ability and resources of the EDB is needed to support SME upgrading and development of long-term industrial capability. This includes areas like much better access to financing, technology and business re-organisation, including relocation and marketing. Capital allowances for upgrading, industry-based technology and best management practice extension centres all need to be much better organised and resourced to meet the huge, secular upgrading effort that Singapore's SMEs will face.

Strengthen Safety Nets and Social Policy

To help the increasing number of workers who will need to adapt to a complex and possibly uncertain employment market and the coming wave of baby-boomer retirees, Singapore ought to strengthen its social safety net, including adopting unemployment insurance and offering grants to poor retirees. It ought to reconsider its overall social policy, helping prevent a bulge in the ranks of the vulnerable as Singapore deals with technological change and globalisation.



Because the economy's sector composition is likely to change more often in the future, structural unemployment may rise and cyclical unemployment could occur more frequently. Singapore could introduce a wage-insurance and unemployment-credit programme to give people breathing room to find a new job quickly in a new industry, thus enabling the labour market to become more flexible. Under this proposal, the government will help people tide over spates of unemployment by allowing those who have recently lost jobs to borrow from their CPF savings for three to six months and pay back to the CPF account after they have found new jobs.¹⁰ If the new salary is lower than the previous salary, a government organised insurance scheme could provide a subsidy for a limited time, encouraging people to accept new but lower-paying jobs more quickly.

To help the groups that are likely to become vulnerable as the economy becomes more volatile and as the population ages, Singapore ought to expand and invest more money in social safety nets through supplements for income, retirement savings and health insurance. The study group further proposes that:

- To raise incomes for the poor, the government could raise the Workfare Income Supplement (WIS) to two to three times the current level. The increased supplement will enable the working poor to earn a living wage for their families until labour productivity gradually enables companies to pay higher wages without losing competitiveness.¹¹ The enhanced WIS needs to be complemented by tighter immigration to encourage companies to bid for scarce labour and set appropriate minimum wages for sectors to prevent employers from cutting wages due to the larger WIS payouts.
- Given the vulnerability of the old and less educated, the government could help them meet retirement needs by giving means-tested inflation indexed grants to the poor (as Hong Kong practises) and by increasing the inflation-adjusted interest rate on CPF savings so that younger workers can improve retirement adequacy, and by increasing health and transport subsidies for the old.

10. For a discussion of proposed Unemployment Credit and Wage Insurance System as well as means-tested pension benefits for Singapore, see Yeoh et al (2010).

11. The government introduced the WIS in 2007, which gives subsidies to workers with incomes below \$1,700 a month to help them meet basic needs and build retirement savings.



- To help people cope with rising health and long-term care costs as the population ages, the government needs to expand MediShield by providing life coverage, not just till 85 years old; risk-pool across all age groups (not just within age-groups) to facilitate whole-life coverage and curb sharp rise in premium past 80 years old; cover services outside hospitals especially long term and chronic care; make such medical insurance mandatory for all to prevent adverse selection; and use the expanded WIS to subsidise premiums for the poor.¹²

The government should also increase subsidies¹³ for public clinics so people prevent and control chronic illnesses; otherwise, people may skimp on preventive and early care, but spend more on late-stage treatment. Government spending on health, as a share of GDP, is much lower in Singapore than in other rich nations. This amounts to a shift towards more fully socially insured and better government funded universal insurance, which is needed as the population ages and dependency ratios plunge.

Beyond targeted assistance, the government also ought to rethink its social policy framework, which assumes that rising incomes enables people to support themselves and their families. Besides recent laudable efforts to “de-link” HDB built-to-order (BTO) prices from resale prices and reduce them by over 30% in non-core estates, subsidised rental flats need to be made more freely available (as in Hong Kong). Such broader social investments will help prevent a bulge in the ranks of the vulnerable as the population ages and as economic change quickens.

3.5 REFERENCES

- Cavelaars, P. 2004. “Has the Tradeoff Between Productivity Gains and Job Growth Disappeared?”, OECD Research Memorandum 0403.
- Estevez-Abe, M. 2012, “Skill Formation and the Challenge of Globalization: Is there a Skill System that Makes Everyone Better-Off?”, Maxwell School of Citizenship and Public Affairs, Syracuse University.
- Fredriksson, P., B. Ockert and H. Oosterbek. 2013. “Long Term Effects of Class Size”, *Quarterly Journal of Economics* 128(1): 249–85.

12. The announcement of enhancements to MediShield in a successor scheme to be called MediShield Life was announced in the Prime Minister’s National Day Rally speech on 18 August 2013.

13. Enhancements to the Community Health Assist Scheme were announced by the Ministry of Health on 29 August 2013, broadening subsidised healthcare coverage for a larger group of Singaporean households.



- Hanson, G. H. 2011. "Immigration, Productivity and Competitiveness in American Industry", University of California and National Bureau of Economic Research.
- Jorgenson, D., M. S. Ho and K. Stiroh. 2004. "Will the U.S. Productivity Resurgence Continue?", *Current Issues in Economics and Finance* 10 (13), Federal Reserve Bank of New York.
- Lim, L. 2013. "What's Wrong with Singaporeans"?, unpublished essay, March.
- Lutz, W. 2013. "Low Fertility, Human Capital Development and Economic Growth in an International Context". Lecture at the Institute of Policy Studies, 19 February, Singapore.
- Ng, I. Y. H. 2007. "Intergenerational Income Mobility in Singapore", *The B.E. Journal of Economic Analysis & Policy* 7(2), Article 3.
- Prskawetz, A., B. Mahlberg, V. Skirbekk, I. Freund, M. Winkler-Dworak, T. Lindh, B. Malmberg, A.-C. Jans, O. S. Nordström and F. Andersson. 2005. "The impact of population ageing on innovation and productivity growth in Europe". Report for EU Tender VT/2004/454, Wittgenstein Centre for Demography and Global Human Capital, Vienna Institute of Demography, Austrian Academy of Sciences.
- Raffe, D. 2003. "Pathways Linking Education and Work: A Review of Concepts, Research and Policy Debates", *Journal of Youth Studies* 6(1): 3–19.
- Thangavelu, S. 2012. "Foreign labour, Local Human Capital and Balanced Growth: Case of Singapore". Paper presented at the IPS Population Conundrum Roundtable on Singapore's Demographic Challenge, 3 May, Singapore.
- United Nations Department of Economic and Social Affairs Population Division (UNPD). "World Population Prospects", the 2012 Revision (Medium Variant). <http://esa.un.org/wpp/>.
- Yeoh, L. K., W. T. Hui, D. Low and T. M. Soh. 2010. "Manpower Policy for Inclusive Growth Post ESC: Re-tooling Singapore's Social Safety Net and Social Security". REACH Manpower Policy Study Sub-Group.





Chapter 4

Land and Physical Infrastructure



CHAPTER 4: LAND AND PHYSICAL INFRASTRUCTURE

4.1 TERMS OF REFERENCE

With the objective of formulating appropriate recommendations for short and long-range planning and development policies in Singapore, this chapter considers the following issues in the context of Singapore's demographic trends arising from IPS' population projections:

- The impacts of different demographic scenarios on land use and physical environment
- The current thinking and potential strategic responses in relation to land use, transport, green and open spaces, housing and related issues

4.2 BACKGROUND

Carrying Capacity

The concept of carrying capacity is well established in the biological sciences, and is usually defined as the maximum population of a given species that can be supported indefinitely in a defined habitat without permanently impairing the productivity of that habitat (Rees and Wackernagel 1996). It is known that certain species or populations will perish if the conditions that support their survival such as food and water are depleted as a result of over-grazing, or if the conditions are degraded to the extent that they can no longer support the essential functions of food and habitat.

However, the applicability of this concept to human settlements has been widely debated. Scholars have observed that people seem to be capable of continuously increasing the carrying capacity of their resources by importing locally scarce resources and through technology, and there is a notion amongst some economists and planners that carrying capacity can be indefinitely expandable and is therefore irrelevant (Daly 1986). Ecologists, however, have also argued that despite technological advancement, humankind remains in a state of "obligate dependence" on the productivity and life support services of the ecosphere (Rees 1992). From an ecological perspective, adequate land and associated productive natural capital are still regarded as fundamental and could limit the prospects for continued civilised existence on earth (Rees 1996).

The general understanding today is that carrying capacity is not necessarily determined by natural constraints and local resources alone but also contingent on a dynamic range of interactions with geo-politics, consumption



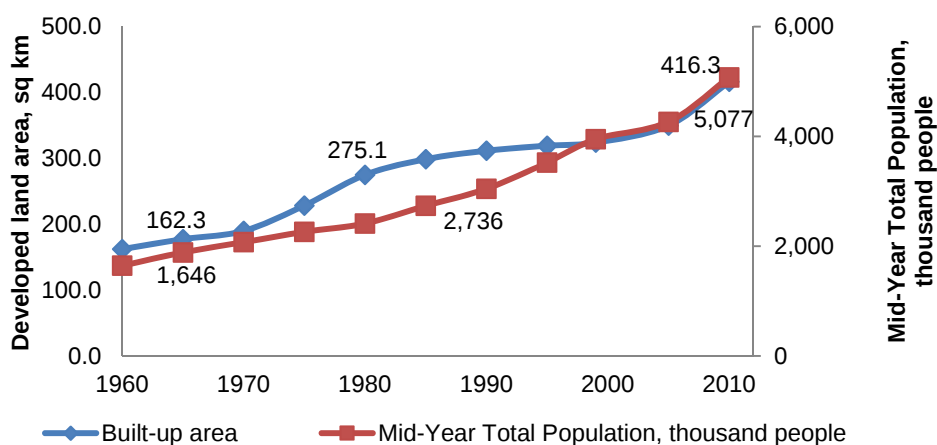
patterns, adaptive capabilities, international trade and technologies,¹ and innovations. Ultimately, it is contingent on the choices people make for the future and the trade-offs they are prepared to accept.

In the context of this study that focuses on land as a key resource, this chapter seeks to examine the choices that are available to support adaptive responses that could stretch a country's carrying capacity. The discussion should contribute to the consideration of potential social and economic trajectories associated with different scenarios of population increase and urban change for the immediate and longer-term future.

Historical Trends on Population and Land

Since the 1960s, the population of Singapore has grown more than three times to 5,183,700 in 2011. GDP has expanded 14 times (Singapore Statistics 2010, at 2005 market prices). To support such population and economic growth, land needed for various social and economic functions related to urban expansion has been increasing year to year. From Figure 4.1, it can be seen that the period from 1970 to 2000 was a phase of intensive urban development, and the rate of increase of built-up areas outstripped the population growth rate. Since then, the extent of built-up areas has been increasing at almost the same rate as population growth.

Figure 4.1. Land consumption and population growth (1960–2010)



Source: Computed from Singapore Yearbook of Statistics (various years)

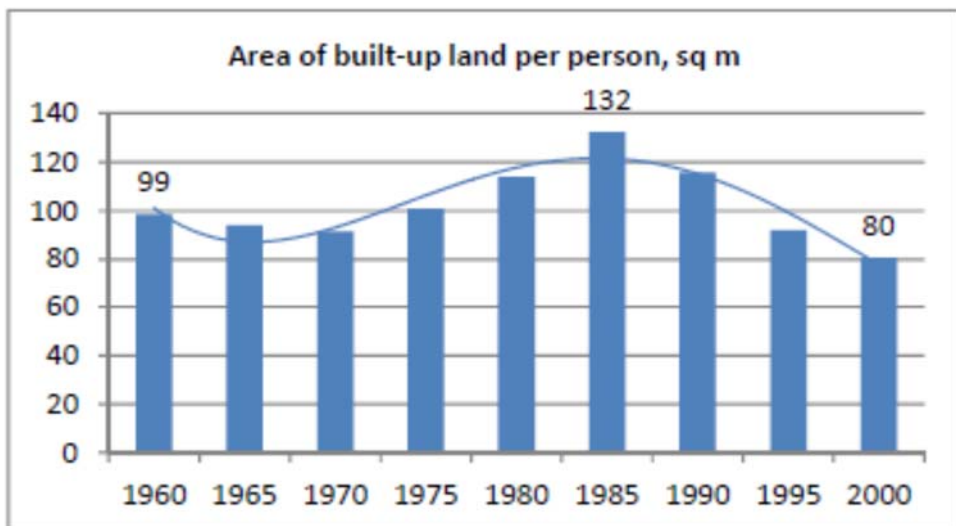
1. Trade and technology are often cited as reasons for rejecting the concept of human carrying capacity as free trade is considered to be invariably good, resulting in improved living standards and increased aggregate productivity and efficiency, and overall, increased carrying capacity, through comparative advantage (Rees 1996).



As the demand for land increased, Singapore's land area has been continuously augmented through coastal reclamation. In 2011, total land area stands at 714.3 sq km. However, there are geo-political and technological limits to further future reclamation. In the Concept Plan Review of 1991, the ultimate land area has been projected to be 759 sq km. This figure has since been revised upwards.

Figure 4.2 summarises the land consumption pattern in the last 40 years. Land-take per person has increased gradually since 1960, peaking in the 1980s. Since then, average land consumption rate has been on a downward trend, coming down from the peak of 132 sq m per person in 1985 to 80 sq m per person in 2000. This downward trend is quite remarkable, considering that Singapore's annual GDP growth rate over the past decades has been on a steady upward trend, averaging 8% yearly. It shows that planners have been extremely stringent in managing land, and their efforts to optimise land use would seem to have borne fruit. The questions we ask are: Can this downward trend be sustained in the coming years with continued population pressures and new economic demands? What would be a sustainable land consumption pattern? How much of land should be conserved for future generation?

Figure 4.2. Land consumption pattern in Singapore (1960–2000)

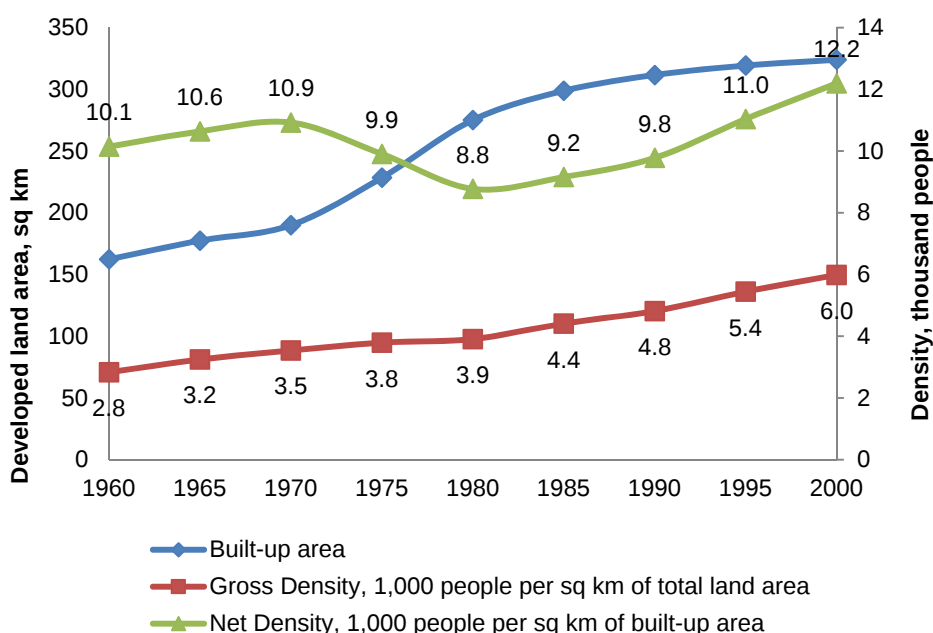


Source: Computed from Singapore Yearbook of Statistics (various years)

Population Density

The conscious effort to conserve land is also apparent in the changes in urban densities. Since the 1960s, gross population density² for the city-state has gradually increased, doubling from 3,000 persons per sq km to 7,257 persons per sq km today (Figure 4.3). More significantly, net urban density (i.e., population in the built-up area) has also been on a somewhat steeper upward climb, from its lowest point of 9,000 persons per sq km in 1980, to around 12,400 persons per sq km today. This trend is also a manifestation of a guarded attitude towards land consumption on the part of government planners in the face of a growing economy and population.

Figure 4.3. Population densities (1960–2000)



Source: Computed from Singapore Yearbook of Statistics, various years

Land Use Change

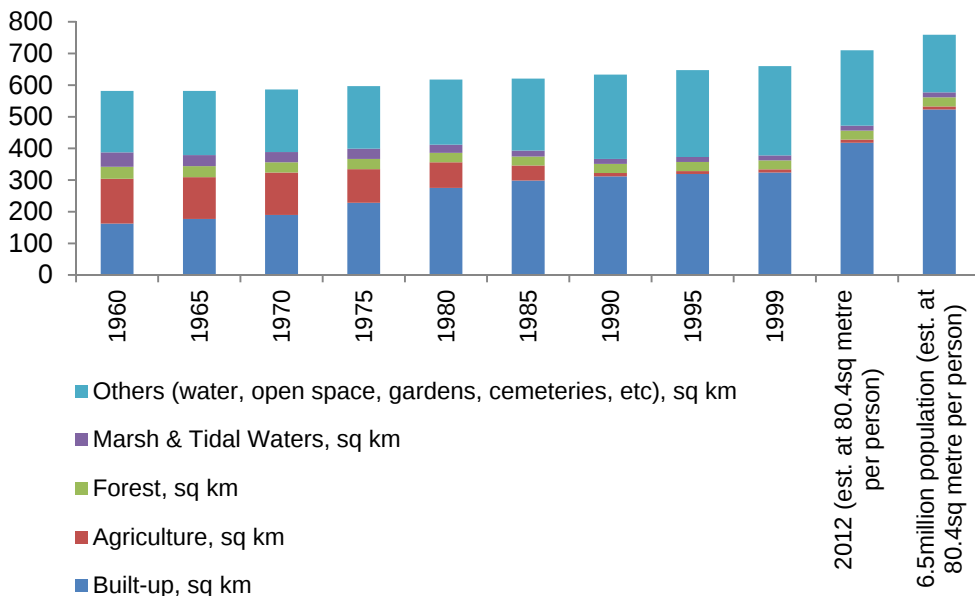
The shift in land use pattern over the years as a response to development activities is largely in the nature of more land for urban activities and less for farming and related purposes. In 1960, Singapore had about 24% of its 581 sq km of land in agriculture and farming use, and this has gradually whittled down to a negligible amount of today (Figure 4.4). In the year 2000, built-up

2. We define gross density as the total population over the total land area; while net density is the total population over the built-up land area.



or developed land was computed to be about 48% of the total land area of 682 sq km. For today's population of 5.2 million, if we assume the land consumption rate of 80.4 sq m per person from 2000 (as shown in Figure 4.3) and that the net density remains steady, the amount of built-up or developed land as a proportion of total land is estimated to be around 60% or slightly more. If we project this linearly to a future population of 6.5 million, the proportion of built-up area could be increased to around 70% or more. This would most likely be at the expense of land currently found in the category known as "others" (see Figure 4.4).

Figure 4.4. Land use distribution and change



Source: Compiled from Singapore Yearbook of Statistics (various years); figures for the last two columns are computed

The category known as "others" (shown in light green in Figure 4.4) includes inland water areas, natural open spaces, cemeteries, land for special use, etc., which can be collectively regarded as the "greenfield" of Singapore. For the future, we need to ask if Singapore as a country can afford to have its greenfield further depleted.

We surmise that it is neither desirable nor possible for Singapore to keep drawing down its greenfield areas for development activities. Singapore is a city and also a country. Therefore, the need for land would go beyond supporting conventional city functions for homes, jobs, mobility, recreation, etc., but also would have to include reservoirs and water catchment, military

training and defence installations as well as large-scale infrastructure such as airports and seaports and industries to diversify its economic base. Other cities such as Hong Kong, New York and London do not need to make these provisions.

In the last few decades, there have been conscious efforts on the part of Singapore's urban planners to conserve land, while maintaining the quality of the living environment. The strategies adopted are demonstrated in each review of the strategic Concept Plan.

It is undeniable that the economic value of land is of paramount importance when making strategic plans. However, land that is not developed is also widely acknowledged as having potential to contribute to ecological services and other values. The size and proportion of undeveloped or less developed land can have a significant impact on the quality of the living environment in terms of its physical characteristics as well as the positive social, psychological and health-enhancing values it confers. Indeed, Singapore's attractive cityscape and liveable environment today can in part be attributed to its large tracks of wooded areas, reservoir areas and vast open spaces that are interwoven into its urban landscapes. These qualities must not be compromised.

Therefore, the important questions are: How would the country respond to the increasing pressure on land with anticipated population growth and expanded economic activities in the future without further depleting its green spaces? What are the options and trade-offs? If urban density were to be increased, how would this affect the living and working environments?

4.3 ANALYSIS

IPS' population projections (Figure 1.2) present several scenarios of Singapore's resident and total population through 2050. Assuming a net intake of 30,000 new citizens and permanent residents (PRs) per annum and various proportions of foreign-to-resident population, the IPS Population Projections indicate a total population size of between 6.1 and 7.3 million in 2050, with "Scenario 2A" projecting a total population of 6.5 million in 2050 (in which one in four persons is a non-PR foreigner).

This presents many challenges, including land limitation; higher densities; an ageing population; a large pool of migrant workers who would require provision in terms of accommodation, transport, healthcare and other amenities; the need to maintain liveable living and working environments, nature and heritage conservation and open spaces, providing adequate



infrastructure, particularly improving the transport system, enhancing social amenities, and responding to changing aspirations.

The recent “Our Singapore Conversation” series of discussions highlighted five major concerns of Singaporeans, namely, cost of living, healthcare, housing, education, elderly issues and social values (CNA 2013). These must be addressed, in addition to the important aspects of quality of life identified in the 2009 URA Lifestyle Survey, which included public transport facilities, food establishments, healthcare services, green spaces and educational facilities (URA 2010).

The challenge for planners is to offer a range of responses to cater to the wide-ranging expectations and to define these in tangible spatial planning and land-use terms. While the current provisions of housing, education and open spaces are based on known typologies and tested planning standards, future responses would require more nuanced understanding and deeper appreciation, to provide finer differentiation of physical spaces that satisfies a more diverse population base, as well an expansion of social and intellectual spaces. This requires not only greater sensitivity to what people want, but, more importantly, an enlightened planning regime that is open to active participatory involvement of people who are affected.

Housing and Density

Today, over 80% of Singapore residents live in HDB apartments in well-planned new towns. Considering the changing demographics, particularly in terms of the larger pool of ageing population and the more diverse population profile, what will be the model of the new town of the future? How would existing towns be retrofitted? What would be the projected space needs, in response to the various scenarios of the ageing living with their families (requiring large apartments); by themselves (requiring separate housing provisions); downsizing (moving to smaller apartments); sharing accommodation, etc. The challenge appears not to be only in terms of size, typologies and location, but also in understanding the values, preferences, expectations and social needs of this diverse population base.

There are currently 23 HDB new towns in Singapore occupying 182 sq km, or about 26% of the total land area. The current average density in HDB new towns is about 17,000 persons per sq km, while the net average density (based on residential land within the HDB towns) is much higher at 43,000 persons per sq km (figures based on HDB Annual Report 2010/2011). It is clear that while the gross density for Singapore was 7,257 persons per sq km in 2011 (according to the Department of Statistics’ *Population Trends* 2012), and the net urban density (population in the built-up area) around 12,400 persons per sq km today, the density within HDB new towns is a lot higher. Would the future additional population aggravate this unevenness in



density distribution? This has to be addressed, for it is usually these localised extremes of density that is the cause of residents' perception of overcrowding and experiences of urban stress and unhappiness.

Urban Greenery and Environment

Urban spaces and parks are important social assets that can help mitigate many of the negative impacts of high-density living. They are also great social levellers, since they are available for all to use. Singapore currently enjoys a high level of quality urban space and greenery, and a major challenge is to maintain the amount, quality, type and distribution of these spaces. With future pressure on land, the prospects for large-scale increase in green areas relative to population growth would be very limited. The challenge is to look for new opportunities (apart from roofs, walls, car parks, etc.) and innovative greening typologies that are both aesthetically and ecologically appropriate, in the context of limited land and competing uses.

The question of what type of "green" do Singaporeans really want would require further study as there seems to be a perception that "manicured" spaces that contribute little to ecological systems may not be adequate at all. There is now greater awareness of the more wide-ranging benefits such as scientific, educational, heritage, psychological and health-related values from having more natural areas.

Increasingly, the rise of environmental activism would become a major challenge in decision-making. The question of how to effectively engage stakeholders' interest without jeopardising the essential decision-making machinery in the country is going to be an important one.

Urban Transport Planning

Transport stress is one of the most aggravating of urban woes. Urban mobility is an important indicator of a city's liveability, and the high economic, social and health-related costs of traffic congestion, delays, long waiting times and stoppages must be recognised.

In Singapore, notwithstanding strong measures to deter car ownership, the total motor vehicle population has continued to rise. On the roads, the number of vehicles in relation to road length has also increased, and the intense competition for road space where private vehicle users are pitched against buses, taxis, cyclists and other road users has become all too apparent. In the past, large-scale investment in road expansion projects may have helped to moderate the vehicle density, but with road space already taking up around 12% of the land area in the city-state, can continued infrastructure expansion be sustained in the future? A related question is



whether we should devote limited land resources to provide better mobility that benefit mainly the car-owning segment of the population.

With a close to 60:40 modal split between public and private transport usage, Singapore is already a society dependent on public transport. Public transport patronage has continued to increase despite relatively long travelling times. In the last 16 years, the average daily ridership of Singapore's Mass Rail Transit (MRT) has increased at a compound annual growth rate of more than 7%. In future, the travel demand will continue to grow, and much of this would have to be met by augmentation of the public transport system. However, rail system investments are capital-intensive undertakings and have a long gestation period; other alternative and appropriate solutions must be explored.

4.4 RECOMMENDATIONS

Prior to the release of the 2013 Population White Paper, three discussion sessions were held to consider the above issues and challenges. The discussion group focused its attention on the land and environment aspects of population growth. It noted the importance of keeping options opened since mistakes made on hardware issues would be difficult to correct and could be a blight on Singapore's urban landscape for a long time to come.

Integrated solutions that do not rely solely on physical planning would be necessary. Since land as a resource is in fixed supply, we need to look for ways to achieve economic objectives that have least land requirements. Although we envisage that Singapore's economy would move to become more service-oriented, it cannot be denied that manufacturing would still be a crucial component of the economy. The manufacturing sector's land consumption patterns can and should be changed with advancement in technology. Concurrently, the economy must be developed increasingly through creative talents, innovative methods and a highly productive workforce, with a focus on high value-added industries.

Parallel attention is needed to address both the supply and demand side of land requirements for a growing population. On the supply side, we envisage a multi-prong approach to explore all possible ways to expand sea, air and underground spaces.

Expanding Land Capacity

The potential total area of Singapore is 1,385 sq km including its sea space of 680 sq km. There have already been various research on floating offshore developments, which include floating platforms for military purposes, floating shipping container terminal, floating green cities (such as one



conceptualised by the Japanese), etc. These ideas should be further studied, particularly for land uses such as large-scale storage and other uses that require less permanent infrastructure (the floating platform at Marina Bay is a good example).

With the proposed future relocation of the Tanjong Pagar, Keppel and Brani container terminals to Tuas, substantial land would be freed up, and this southern corridor must be developed as intensively as possible to optimise the current infrastructure, complement the downtown commercial and residential development, and most importantly, lift the development pressure from the rest of the island.

The present five military airbases in Singapore, which take up substantial land and impose constraints for optimising surrounding land uses (due to the requirements of flight safety), should be reviewed. By 2050, at least one of them — potentially, the Paya Lebar Airbase — should be discontinued and its operations consolidated with the other airbases, so that substantial land can be freed up for other purposes.

Underground space should be used wherever feasible to free up surface land. The rock structures in various parts of the island support deep cavern excavation. Where cost and other constraints can be overcome, land uses such as factories, warehouses, roads and other infrastructure should go underground. Localised flooding problems could potentially be addressed with underground drains and large-scale water storage facilities.

High-density Housing

High density does not necessarily mean poor environment if we have a good understanding of physical and environmental impacts and have good design solutions. It is important not to look only at gross density across the whole island, but instead look at the distribution of net density particularly within new towns. If we were to continue to introduce additional housing into existing new towns through *en bloc* redevelopment, the resultant net density could be very high and would put a strain on existing infrastructure. A more even spread of moderately high density would be desirable, and only areas with very good accessibility, such as those near MRT stations, should be built to exceptionally high densities.

There would be sufficient land for housing in the future, but we need to manage the density well. High density is not good or bad in itself, but it must embrace good synergy of land uses, have well-conceived urban design and enhance accessibility to amenities and jobs. The perception of “crowdedness” in a city like Tokyo could be very different from Singapore as the residential areas there are designed to be walkable with safe narrow



streets. Creative and “happy” design could help to ease the feeling of crowdedness.

Good design must promote civic qualities and community integration. High density can be mitigated with well-designed housing units of good internal layouts and attractive design, adequate size and if possible, adequate external views, natural day lighting and ventilation. In rethinking housing design, we can look for fairly liveable building forms and typologies such as those in Paris or Prague, where the building heights are lower but overall density still high. They are well integrated and functional.

Juxtaposition of public and private housing is desirable for better social integration. Bishan is a good example. Educational and community facilities can be the integrative elements. One idea to bring vibrancy into towns is through careful insertion of educational facilities as the “central nervous system” of towns, so that all towns are “school towns”³ and hooked into community network. The new urban form must be supported by a new local economy, potentially centred on learning and its associated functions.

Given the rapidly ageing population, public housing must provide for the older population with smaller housing units, to promote ageing-in-place. To prepare for the future, there could be built-in flexibility and modularity for reconfiguring HDB apartments into smaller units for smaller households. Larger units are still needed for young families in newer towns. The HDB could also consider bringing back Multi-Generation Flats (1987) which are 4/5-room flats with adjoining studio apartments; a shared foyer that leads to the studio unit and the standard unit, and Granny Flats (1991) which are a mix of both studio and standard units in the same block of flats, providing privacy comparable to the dual key concept in private housing.

We need to explore new planning and design models of new towns to ensure that they are elderly-friendly. The essential services and amenities must be in close proximity to support residents’ daily needs; their design and distribution should be planned primarily on principles of accessibility and convenience. Where appropriate, public amenities should not be age differentiated (e.g., old-age corners) to allow for greater social interaction and development of a sense of community.

Transient Population

The issue of housing supply for the transient population must be addressed. Given the projected high proportion of foreign workers, the demand for

3. Drawing upon the concept of “university towns”.



housing of this group should be an integral part of housing development planning for the future. Early planning is important to avoid a situation where such housing is perceived as an intrusion into existing housing environments, giving rise to residents' unhappiness (as was seen in the Serangoon Gardens case).

Table 4.1. Potential housing needs of Singapore's transient workers

Transient population status	Current proportion of transient groups (of total transient population) ⁴	Estimated number of transient workers ⁵	Proposal for housing supply
Employment pass holders (EPs)	12%	300,000	Rented private or HDB apartments
S pass holders	9%	225,000	Shared accommodation or rented rooms in HDB apartments
Work Permit holders (excl. Foreign Domestic Workers)	46%	1,150,000	Dormitories or other forms of shared accommodation
Foreign Domestic Workers	13%	325,000	Housed with employers
Long term social visit pass holders (as dependents of PRs, EPs, SP)	15%	375,000	Rented rooms in HDB apartments
Students	6%	150,000	Hostels or rented rooms in HDB apartments

Source of percentages: Population White Paper 2013 (figures are calculated)

Table 4.1 above estimates the potential housing needs of various groups of transient workers, and suggests that there is a need to include projections for workers' dormitories, hostels as well as additional apartments (HDB and private) for these in future land-use plans. Their distribution and locations

4. Source of percentages: Population White Paper 2013.

5. These estimated numbers are calculated based on current proportion (column 2) of the projected 2.5 million transient population by 2030 according to the Population White Paper 2013, assuming that the proportion remains the same as present.



must be carefully considered as part of the planning process, and judicious integration into existing housing estates is recommended.

Transport

Planning for transport must be integrated with other land uses such as schools, hospitals, etc., as well as employment places. The concept of “decentralised concentration” is suggested as a better model as it means better distribution of dense urban nodes and compactness across the island. It would promote better accessibility and less travel.

Transport by car takes up not just road space but also requires parking and related spaces. Given limited road space, the more people use cars, the slower would be bus and car trips, and the greater would be the congestion impact on other road users such as cyclists and pedestrians. We need a multi-mode response to entice private car users to switch to public transport, and for this, immediate and long-term planning should include planning of the bus networks, light rail and even PRTs (Personal Rapid Transport) systems. For shorter trips, non-motorised transport, such as bicycles and walking should be encouraged with provision for safety, appropriate amenities and convenience.

Transport policies and trends impact the liveability of the city. We should consider what is needed to get people back to streets, which must be safe and conducive for walking. Liveable streets are those like Little India and Geylang Serai, where the co-existence of traffic and pedestrians is seen as a norm rather than a conflict. Selectively decreasing traffic speed in these and other local areas would improve their environments and promote walking.

With the use of technology, it is possible to provide real-time information on traffic conditions, and thus influence travel patterns during peak hours. Information and communication technologies (ICT) must be harnessed as they can have a real impact on transport demand and mobility by influencing their volume and distribution in time and space.

In the URA Lifestyle Survey 2009, it was also reported that 23% of Singaporeans have telecommuted or worked from home before, with “73% of them having done so at least once a week”. To promote more tele-working or flexi-working, government employers could take the lead. There should be strong support for schemes and incentives for off-peak commuting and carpooling.

Today, land for transportation infrastructure makes up 12% of total land use, the bulk of which is taken up by expressways and arterial roads. In the future,



there would be new and different modes of transportation and different modes of working such that the need for land space to support mobility would be very different. The questions of how we would commute, what technologies are available, and indeed, why we have to commute are important considerations. For the present, greater land-use and transport integration (e.g., more mixed uses) as well as flexible work arrangements (why do we need to move “from one computer terminal to another”?) would be the key to improving the current conditions. These are preferred solutions than building more infrastructures since space is a constraint.

Open Spaces, Urban Greenery and Heritage Sites

As Singapore's population and economy grows, there will be greater pressure to draw upon land that is currently not developed. Singaporeans do have a deep desire for keeping greenery and we need to take strong measures to protect nature reserves, parks, open spaces and heritage areas. Those that are not currently protected must be accorded legal protection.

One of the key concerns highlighted in the recent “Our Singapore Conversation” exercise is the unequivocal call for more citizen consultation on issues of public interest, including the conservation of heritage and green spaces. However, consultation is a two-way process. Where stakeholders are involved in decision-making, they must be open to alternatives and trade-offs. In some instances, to protect nature areas could imply higher development density in certain areas or maybe even less road space or longer travel time.

Instituting environmental impact assessments, whether formally or informally, would be a positive step forward to empower the people with the information or basis for decision-making, and provide a common ground for public engagement in the policymaking process. We need a combination of top-down and bottom-up approaches in planning for nature areas. Consulting the public at an early stage will provide greater opportunity for dialogue and allow time for responding to people's concerns as well as better understanding of government decisions.

Golf courses take up much land that could be used for other purposes. Moreover, they are generally not open to the general public. A survey by the Nature Society has shown that only 3% of Singaporeans support golf courses. Although golf courses are currently said to be built mainly in areas with height restrictions or as part of reservoir catchments, it will still be necessary to review their numbers relative to population and land size, and to consider potential alternative uses such as low-rise development, “clean” storage, etc.



Green spaces must increasingly become more multi-functional, such as integrating with educational facilities and community uses. We should also consider their ecological values. Better use of resources should be made, such as the now disused railway corridor, which presents opportunities for recreational, educational, community and a host of other co-located functions.

4.5 CONCLUSION

This report is only able to consider a limited number of areas relating land and environment in the context of the demographic trends highlighted in IPS' population projections for 2050. Nonetheless, it hopes to have highlighted the key areas of public interest and pointed to areas for potential review by policymakers.

4.6 REFERENCES

- Channel NewsAsia (CNA). 2013. "Cost of living, housing among issues raised at Our Singapore Conversation". <http://news.xin.msn.com/en/singapore/cost-of-living-housing-among-issues-raised-at-our-singapore-conversation>.
- Daly, H. 1986. Comments on "Population growth and Economic development", *Population and Development Review* 12: 583–5.
- Rees, W. 1996. Revisiting carrying capacity: Area-based indicators of sustainability. *Population and Environment*, 17, 195–215.
- Rees, W. 1992. "Ecological footprints and appropriated carrying capacity: what urban economics leaves out", *Environment and Urbanization* 4: 121–30.
- Rees, W. and M. Wackernagel 1996. "Urban ecological footprints: Why cities cannot be sustainable — and why they are a key to sustainability", *Managing Urban Sustainability* 16: 223–48.
- Urban Redevelopment Authority (URA). 2010. *URA Lifestyle Survey 2009*. Singapore: Urban Redevelopment Authority.





Chapter 5

Marriage and Child-Bearing



CHAPTER 5: MARRIAGE AND CHILD-BEARING

5.1 TERMS OF REFERENCE

This chapter considers the impact of existing incentives and policies to encourage marriage and child-birth, and other direct and indirect ways to raise the total fertility rate (TFR).¹

5.2 BACKGROUND

Singapore's resident TFR has been below the replacement level (generally considered to be about 2.1) since 1977. Together with Hong Kong, Japan, South Korea and Taiwan, Singapore ranks amongst countries in the world with the lowest fertility rates.

The TFR has remained ultra-low despite Singapore's pro-natalist policy stance, adopted since 1987. Marriage and Parenthood packages announced by the government in 2001, 2004, 2008 and again in 2013 include financial incentives such as baby bonuses and parenthood tax rebates, and various forms of support for parents to balance work commitments with their family.

As reported in *Population in Brief 2011*,² the primary causes of ultra-low fertility in Singapore arise from various contributing and inter-related factors, including:

- More people remaining single
- More people getting married later in life
- More people having children later in life, and having fewer children or no children at all

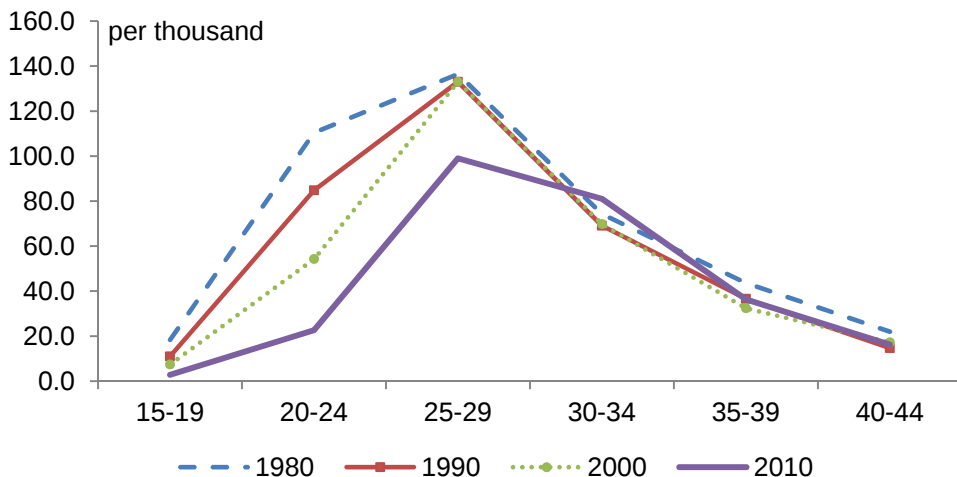
Figure 5.1 shows how age-specific female marriage rates have changed over the past four decades since 1980. Overall marriage rates have declined over time for all age groups, but most sharply among females in the 20–29 age group, with only a modest rise recorded in 2010 for females in the 30–34 age group. This is confirmed by the steadily rising average age at first marriage (Figure 5.2). In 2010, for males, age at first marriage had risen to 30 years from 28 years in 1990. For females, this figure had increased to 27.7 years from 25.3 in 1990.

1. The average number of children a woman would bear over the course of her lifetime if current age-specific fertility rates remained constant throughout her child-bearing years (normally between the ages of 15 and 49).

2. National Population and Talent Division, Prime Minister's Office.

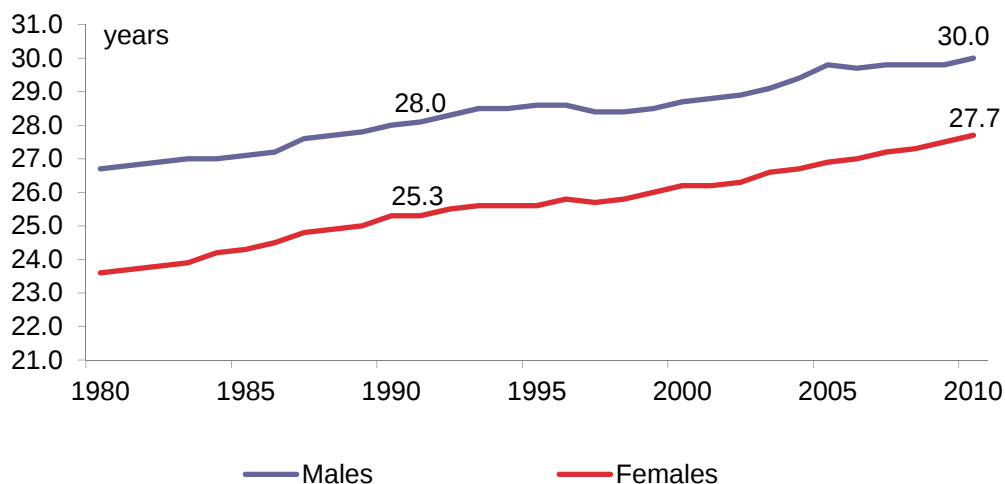


Figure 5.1. Age-specific female marriage rates, 1980–2010



Source: Department of Statistics, Singapore, Population Trends 2011

Figure 5.2. Median age at first marriage for males and females, 1980–2010



Source: Department of Statistics, Singapore, Population Trends 2011

Singlehood rates for women and men in their late 30s have remained quite steady at relatively high levels since the 1990s (Table 5.1).



Table 5.1. Proportions of singles by age and sex (%)

	1995		2000		2005		2010	
Age group	Males	Females	Males	Females	Males	Females	Males	Females
25–29	67	41	64	40	71	46	75	54
30–34	34	20	31	20	34	22	37	25
35–39	20	15	20	15	20	15	20	17
40–44	12	13	15	14	15	14	15	14

Source: Department of Statistics, Singapore, Population Trends 2011 and 2006

Table 5.2. Proportion of singles by age, sex and educational attainment (%)

Age	Below Secondary		Secondary		Post-secondary		University	
Group	2000	2010	2000	2010	2000	2010	2000	2010
Males								
20–24	88	89	92	93	96	97	96	99
25–29	62	64	58	64	70	72	69	76
30–34	40	39	29	38	28	39	28	38
35–39	28	29	18	25	15	23	13	19
40–44	21	23	14	18	9	16	7	12
Females								
20–24	53	55	71	73	86	88	91	93
25–29	21	23	30	35	43	45	54	55
30–34	13	13	17	18	23	24	27	28
35–39	10	9	14	13	20	17	23	19
40–44	9	9	15	12	20	14	22	17

Source: Department of Statistics, Singapore, Population in Brief 2011 and 2006 reports

Age-specific fertility rates show a similar trend as with marriage rates, with fertility rates for women in the peak child-bearing ages (the 20–34 age groups) declining significantly over the past four decades. The median age at first birth for citizen mothers has increased by 1.2 years over the past 10 years, and the number of higher order births, especially second and third order births have declined.



FACTORS INFLUENCING MARRIAGE

The decline in marriage rates across East Asian countries does not mean that there is little interest among young adults in the region to tie the knot. Polls regularly show that marriage is an important goal in all these societies where 80 to 90% of those surveyed indicate such an opinion (Chan 2001; Kaneko et al. 2008; Lee 2006; Quah 2009). The most recent large-scale government survey in Singapore of singles shows that 84% are interested in marriage whilst the latest *Perceptions of Policies in Singapore* survey conducted by the Institute of Policy Studies showed that of 2,000 Singaporean singles aged 21–39 years studied, 69% were definitely desirous of marriage (IPS 2013).

The disjuncture between desire and actual marriage is based on a variety of reasons, many which arise from the complex interplay between empowerment of women, restructuring of work in the modern economy and the change in marriage ideology.

Economics of Marriage and Household Formation

Quah (2009) notes that countries that scored higher on the United Nations' Human Development Index (HDI) were also more likely to be those that have higher ages at first marriage. She suggests that the socio-economic factors represented in the HDI play an important role in the timing of first marriage. Countries that have high HDI scores offer more and higher quality technical and tertiary education opportunities to their young people, which in turn lead to greater employment options. They may thus postpone marriage in favour of career advancement. Although marriage is still a crucial personal life goal as attested by many attitudinal surveys on marriage (Koh 2011; MCYS 2004 and 2007), completing tertiary education, getting onto a fast-track career path and having enough savings to purchase a home have become important pre-marriage milestones. Young people are essentially serious about marriage decisions and think carefully about the responsibilities that are part of such a commitment.

Rising costs associated with the marriage ceremony, housing and raising children have also been cited as reasons for delaying marriage or staying single. Jones (2011) finds that economic stability is considered a pre-condition of marriage, and traditional gender-role expectations of men as providers and women as homemakers tend to cause single women to be increasingly cautious about marrying a man with poor earnings prospects. Economic activity is considered crucial in Singapore for material as well as emotional well-being, and so women are similarly motivated to pursue career success as their male partners, rather than engage purely in domestic duties.



This then means that both genders are inordinately focused on work concerns, often leaving the concerns for family formation to “another day”.

Homogamy or Distortions in the Marriage Market

Jones (2011) points to a “marriage squeeze” in Singapore for less educated men and better educated women, resulting from increases in the number of women completing upper secondary and tertiary education coupled with conventions about educational differences between spouses and appropriate marital partners. In general, Singaporean men tend to marry a woman with lower education and lower income than themselves. Tertiary-educated women prefer to marry those with similar educational qualifications. This effect has resulted in a sizeable proportion of singles amongst the most highly educated women and lowest-educated men (Table 5.2).

New Ideals of Marriage

Expectations of marriage have also shifted from a pragmatic perspective of economic exchange to one that is embedded in ideals of romantic love, companionship and commitment (see Amato et al. 2007; Cherlin 2004; Coontz 2004; Gillis 2004). While most of the literature demonstrating this shift has been based on the realities of Western population, Singaporean scholars similarly highlight this trend (Straughan, 2011, Quah, 2009). The new ideals of marriage seek to provide self-fulfilment. Individual needs are increasingly the focus of a social institution that has traditionally favoured family commitments. The search for the perfect partner in the new ideal of marriage is a time-consuming and challenging activity, which causes many to delay marriage, sometimes indefinitely (Straughan 2011).

The rise in the number of singles in the population also reduces the social pressure to get married. Straughan (2011) highlighted the view of many singles that they did not perceive any pressure to get married as there were many singles within their social networks. Kotkin et al. (2012) have noted that the growing number of singles in society could form a powerful social trend. Since singles are more mobile — more willing to travel and relocate for work — and give more time and commitment to their work, they would become elites in society. The increasing norm of singlehood and its obvious material rewards and personal freedoms may create a cycle of behaviour that could diminish society's perceptions towards marriage.

FACTORS INFLUENCING MARITAL FERTILITY AND CHILD-BEARING

Female Employment and Child-bearing

Rising female employment is a commonly cited reason for the sharp decline in fertility to below-replacement levels in developed economies. This is especially so for Singapore where industrialisation was a strong motivator



for many females to continue their education and pursue labour market options (McDonald 2009; Yap 2009; Jones 2011).

While female participation in the labour force increased, the lag in social provision of care translated to individuals facing difficulties on how to be a parent and walk the tightrope between work and care (McDowell et al. 2005; Teo 2013). Changes in the work sphere necessitate dynamic negotiations over the division of labour within the family, central to which is childcare (McDowell 2001; Sullivan 2000).

Costs of starting a family, having a place to call their own, putting their careers on hold while they have a baby — these are some of the major deterrents to starting a family (Kye 2008; Onishi 2005). This is further exacerbated by “eroding job security”, “inflexible employment practices and a work culture that tends to be incompatible with family life” (Westley et al. 2010, 6).

Availability and Cost of Childcare

The lack of childcare arrangements is seen as an important deterrent to having children. This is because the amount of time entailed in bringing up a child translates to work-family imbalance being a defining characteristic of parenthood for many (Tausig and Fenwick 2001).

The burden of raising a child often falls disproportionately upon women, translating to possible resentment by mothers who have passed up opportunities in the work sphere (Ciscel et al. 2000; Cohen and Bianchi 1999; Hill et al. 2004). This is exacerbated by the fact that women who are used to structuring their own leisure time are now forced to commit valuable time and money to meet the physical and emotional needs of their offspring (Jones 2007, 465). While it is possible for women attempting to juggle both domestic and productive spheres to “outsource” childcare, cultural values often make this option undesirable. One way by which mothers attempt to balance the tensions that arise is to focus on the quality and not quantity of time given to their children. They also expect the availability of high-quality childcare where their child will be well nurtured and kept from any psychological or physical harm.

Even with additional support, gender ideologies in East Asian societies burden women with ensuring that adequate care for their children is in place. The well-being and education of the child seems to be situated on the mother with considerably less effort placed on fathers. While there has been an interest in equalising the “second shift” between the genders, women continue to feel more responsible for domestic tasks.

Intensification of Parenthood and the Sacred Child



Straughan (2011 and 2012) highlights the “ideology of the child” which prescribes intensive parenting commitment and the commodification of childhood. Exacerbated by strong societal pressures of raising the “successful” child in a highly meritocratic, exam-based education system, parents are determined to ensure the child receives a head-start in life, leading to a positional “arms race” amongst parents to invest in educational resources and enrichment classes that are considered necessary for the child’s success. Such intensive parenting commitment unsurprisingly reduces fertility rates as couples concentrate scarce resources on fewer children.

Social Policy and Raising the TFR

Raising the TFR is a challenge, not just for Singapore but for many developed countries globally. The experience of other developed countries seems to suggest that substantial effort has to be placed for a moderate change in fertility behaviour. Oftentimes, new tools are insufficient to effect this change; rather, a whole machinery needs to be in place. At the heart of such a machinery is the emphasis that the concerns of family are taken seriously and put on par with other important economic considerations. Social policies to improve fertility risks work best when they reduce the disadvantages that parenthood and having more children can have for any one family.

5.3 ANALYSIS

The study group for this chapter was of the opinion that the current measures laid out in the enhanced Marriage and Parenthood package announced in 2013, while certainly helpful, did not address many of the underlying concerns that may have an effect on future fertility.

Some group members did not believe that it was likely that the TFR would significantly rise in the years ahead. Worldwide trends indicate that the proportion of eligible singles entering into marriage will go down with increased educational attainment. Marriage, while still highly desirable, is no longer considered as a necessity in the pursuit of the good life since there are other alternatives for experiencing fulfilment in life. Considering the general aversion in Asian societies for out-of-wedlock births, it is unlikely that any major changes will occur to normalise parenthood outside the confines of marriage. Therefore it is to be expected that fertility will not increase substantially since an increasing proportion of singles are not likely to marry.

A group member was also of the opinion that focusing on the TFR as a problem often resulted in policymakers finding “quick-fix” solutions to the supposed population problem. Often, these solutions do not address the



underlying reasons for why couples hesitate having children. Instead, if the low TFR could be seen as symptomatic of the concerns faced by younger generations of Singaporeans, more systemic changes could be initiated that may ultimately resolve the problem of the low TFR.

Current Concerns that Act Against Increased Fertility

Group members were in unanimous agreement that there were some realities in Singapore that would dampen young couples' aspirations to consider marriage and parenthood. These factors did not work in a simple causal relationship. Rather they worked together to shape perceptions that starting a family in Singapore is a highly burdensome activity considering the many obligations that it imposes and the lack of easily available resources to make this task easier. These reasons are spelt out here. Although they have been part of public discourse for a while, they are worth repeating.

Narrow Definitions of Success

Currently success is conceptualised by excellent performance in academics and job achievements. This narrow definition of success ignores other equally important areas of success that individuals can experience. Parenting should increasingly become part of society's conception of the successful individual and should be celebrated rather than left to the private realm.

Pressures of the Educational System

The current educational system with its many competitive exams early in the life of the student was a concern to all group members. The inability of children to enter into prestigious schools and pursue particular academic tracks weigh heavily on many parents' minds because of how this failure is perceived to greatly impact children's subsequent success.

Parents, in their pursuit to ensure good outcomes for their children, feel pressured to devote substantial financial and time investment, failing which they fear that their children would not be adequately prepared for the rigours of competitive examinations and streaming systems. It is well known that much of the preoccupation in families with school-going children revolves around their children's academic attainment, leaving substantially less time to experience the joys of family life.

Human Resource Practice

Group members noted the current emphasis placed on the individual's early career phase in determining subsequent career potential. Workers who excel in the first few years of work are often fast-tracked and earmarked for



more senior positions. Such selection schemes mean that there is little chance for those who are not high performers early in their careers to subsequently gain access to more desirable career options. This human resource practice has the effect of deferring marriage plans among young adults so that they can concentrate on making career success. This probably accounts for why approximately 65% in the 25–29 age group remain unmarried, often postponing marriage to their 30s. Many young people want to ensure career stability before they form families. Women find it particularly challenging to exit temporarily from work for child-bearing, considering its impact on their career trajectory, especially if their line of work is not accommodating to work-life considerations.

Lack of Family-friendly Work Culture

Group members noted the lack of a family-friendly work culture in many business settings. This is apparent considering the difficulty Singaporeans seem to have in asking their employers for flexi-time arrangements; there is general concern about taking time off to attend to their children's concerns or care for various exigencies in their families, which could be felt as signalling a lack of commitment to the job. A Happiness Survey³ conducted among 6,000 members of the NTUC labour movement in 2012 emphasises this fact with only about three in 10 of the respondents indicating that their employers were supportive of flexible work arrangements. Less than half of the respondents' colleagues were perceived to be supportive if there were a need for such flexible time arrangements. In essence the survey showed that only half of the respondents felt that they spend enough time with their families.

While the study showed that employees hoped for greater work-life balance, it also found that employers found it difficult to accommodate this desire for flexibility with current work practices. According to another study⁴ in 2013 by NTUC that obtained feedback from employers, the labour movement noted that although two-thirds of Singaporean employers have provision for flexible time arrangements, about half of them acknowledged that it was a challenge measuring their staff members' performance when they took on such

3. Summary of survey can be found at http://www.ntuc.org.sg/wps/portal/up2/home/aboutntuc/newsroom/mediareleases/mediareleasesdetails?WCM_GLOBAL_CONTEXT=/content_library/ntuc/home/about+ntuc/newsroom/media+releases/615c6c004ec3e226bdeabf093c42a226.

4. Media statement on the study can be found at http://www.ntuc.org.sg/wps/portal/up2/home/aboutntuc/newsroom/mediareleases/mediareleasesdetails?WCM_GLOBAL_CONTEXT=/content_library/ntuc/home/about+ntuc/newsroom/media+releases/74302de1-8c86-41d3-8075-1d182dc126e0.



arrangements. The absence of clear systems ultimately made such arrangements unfeasible especially when workers were concerned about the remuneration they would receive.

High Cost of Living and Aspirations

Group members noted the high cost of living in Singapore and the cost of raising children. An estimate of the direct costs of raising a child in Singapore by online magazine theAsianParent.com⁵ was around S\$340,000, including medical fees incurred during pregnancy and delivery, infant care, childcare, enrichment activities, education costs from preschool to university level, basic food and shopping, without provisions for inflation. Other estimates place this figure at half a million dollars. Estimates vary based on social class – the type of enrichment activities, whether education was provided by public or private institutions and the expectations of vacations all have bearing on the final quantum of raising a child. Among young couples there is sometimes the concern that this cost will continue to rise. This then has an effect when they calculate their financial ability to marry and have children. In fact the recent Marriage and Parenthood Survey 2012⁶ showed that single respondents placed financial constraints as the third most important reason why they were not married, after the reasons of not having met a suitable life partner and needing to commit to work and study responsibilities. When the same question was asked back in 2007, financial constraints were ranked as the fifth concern.

Group members also noted the high costs associated with weddings and setting up a home. The security of a suitable home seems to be important for young couples as they make plans to have children. Costs of what are perceived as necessary for good quality childcare, healthcare and education have a strong bearing in the calculation of young couples before they embark on starting a family.

What Could be Done? — The Limits and Utility of State Involvement

Group members were divided about the extent to which the state should intervene in correcting the low TFR.

Previous attempts by the state to aggressively promote marriage and parenthood through campaigns, such as “Romancing Singapore”, and the matchmaking initiatives of the Social Development Unit were not well received by the population. These initiatives, seen as overly paternalistic,

5. See details at <http://sg.theasianparent.com/the-price-tag-of-raising-a-child-in-singapore/>.

6. National Population and Talent Division website at:
http://www.nptd.gov.sg/content/NPTD/news/_jcr_content/par_content/download_90/file.res/mp-study-2012-press-release.pdf.



were resisted by the young who did not want to cede greater control to state authorities for such intimate aspects of their lives.

Group members believed that the approach adopted by the state in recent years where it performed an enabler function was more appropriate. Establishing generous funding schemes would allow the people and private sectors to champion marriage and family initiatives. Dating services, which currently are not well endorsed by the majority of singles because of their negative connotations, will greatly benefit from increased state support for businesses to re-brand and market such services.

The state also has the ability to legislate or incentivise behaviour, particularly those of businesses. Considering the concerns of nearly half the single population, especially the issue of not having adequate time to date, it becomes imperative that the state embarks on further measures to ensure that young singles are given sufficient time to find suitable partners. One way could be to incentivise businesses to allow their singles time-off for networking sessions which allow them to get to know other singles who work in close proximity to their offices. Additional help of this kind is especially warranted for singles who have to perform shift work where opportunities for interacting with prospective partners is more difficult.

Most study group members were of the opinion that if Singapore were to be a nation and not merely an economy, the state would have to assume a greater social welfare function. Group members however differed in their opinions about the extent to which a higher taxation regime was realistic. They also differed as to the extent to which children should be deemed a public good and therefore the target of greater state expenditure.

Childcare and Healthcare Provisions

Some study group members were of the opinion that universal high-quality childcare and healthcare should be provided since these are essential needs of families. Healthcare bills for childhood diseases can be exorbitant; while there are recent provisions for insurance schemes to cover congenital diseases, such coverage only extends to hospital treatment and not the many other health-related costs for child-related illnesses. If the state could make such provisions to reduce the risks to parents if their child falls ill, it may allay some fears that couples have about child-bearing and the potential risks.

While most group members believed that high-quality childcare should be made available at minimum costs since this is a large proportion of the cost for young parents, others felt that more basic subsidised childcare should be provided. Basic childcare that ensures children are able to experience play



rather than be subjected to formal learning should be emphasised. Some were concerned that the preschool system is being modified to suit the current educational curriculum, which seems to expect that children would have gained literacy and numeracy skills prior to formal schooling. If the school system were to avoid such expectations, perhaps the majority of parents would be satisfied with basic childcare and preschool provision, which would ultimately reduce the cost of providing such services.

Other suggestions about childcare provision are for the state to provide an allowance for parents who use baby-sitters, similar to the grants that parents receive when they place their children in childcare centres. Baby-sitters who provide such services can be trained and audited to ensure basic standards of care and safety in the living environment. Such schemes may in fact be suitable employment options for older workers or women with young children who choose not to return to the labour force.

One group member felt that in addition to universal childcare, universal eldercare should be provided. This was especially important for sandwiched families and would allow young parents to concentrate on their role in nurturing a future generation rather than be overly burdened with the task of elder care.

Regulation of Work-life Balance

Group members were unanimous on the state's role in regulating businesses and ensuring work-life balance. Recommendations include legislating that businesses provide a well-considered response to their staff's request for flexible work arrangements and incentivising companies that report greater use of work-life balance measures. Legislating the right for workers to ask for flexible arrangements may normalise such requests rather than the current situation where workers are concerned that such requests may be viewed negatively by management and colleagues.

Promotion of Marriage, Parenthood and Family Life through Civil Society

There was also the view among some group members that the government should empower more civil society agencies to champion the value of children and marriage, and engage in public education attempts to promote healthy marriages and families. Curbing unrealistic aspirations and expectations are important to ensure that young people do not form the mindset that raising children is financially burdening.

Ensuring that sufficient programmes allow existing parents to better manage their many demands is also important as how they successfully navigate through the demands of parenting inform those not already having children to realise it is a manageable task.



Providing greater emphasis for premarital preparation programmes and other marital strengthening and enrichment endeavours will better allow couples to find lasting relationships, which in turn will encourage the unmarried to pursue marriage.

Civil society groups could also find avenues for families to engage in common activities together. One such way was through sports clubs to which the entire family feels a sense of loyalty and thus a common bond. Voluntary welfare organisations and other cultural groups could similarly find activities that could get entire families joining together in support of a cause or activity.

Non-discrimination of Child-bearing outside the confines of traditional marriage

One group member believed it was important for the state to ensure that policies do not discriminate against single parents. This could increasingly be a reality especially with the anticipated progress in fertility treatments, which will allow greater ease in fertilisation and pregnancy. For the sake of the child, subsidies and benefits of equal levels should be provided to the parents and children from such family types. Closely related, another member felt that whether pregnancies that arise from cohabiting couples are given equal recognition compared to those from stable marriages will also affect fertility growth. Cohabitation, as a prelude to marriage is likely to rise as it has in many Western societies where pregnancies from such relationships account for a significant proportion of child-births. Other group members were concerned that policies should not be misread to condone the bearing and nurturing of children outside the traditional confines of a stable marital union since the stability accorded through marriage seemingly provided a better environment for child development.

5.4 RECOMMENDATIONS

The study group proposes the following recommendations on the part of the government:

- Continued review of educational policies to ensure that the demands of school work and examinations are not overwhelming; that parents do not feel that additional pressure to their children will be necessary for their future success.
- Providing sufficient reassurance for parents that there are enough places at the university level for their children who qualify
- Incentivising or legislating employers to ensure that flexible time arrangements are appropriately considered and, where there is a lack of



expertise in terms of the feasibility, suitable consultants provide recommendation for such possibilities.

- Provide incentives for companies that are able to obtain good outcomes in terms of their employees' well-being through their implementation of work-life balance practices.
- Create schemes for women who leave work for childcare reasons to re-enter employment without losing too much of the value of their prior work experience.
- Foster collaboration or assistance with funding by government agencies for businesses and other entities to organise events to allow greater mingling among singles to form possible relationships.
- Offer greater financial support for dating agencies to re-brand online and other forms of matchmaking services
- Ensure either universal access to or offering well-subsidised basic childcare services that are in line with a curriculum shift that does not emphasise academic achievement prior to formal learning.
- Provide universal access or subsidised eldercare facilities so that young singles and couples do not have to be overly burdened by eldercare responsibilities.
- Give increased support for public education by civil society organisations to curb unrealistic and unnecessary aspirations that people have about parenthood and marriage.
- Offer support to civil society groups to find activities and causes that can unite the entire family so that family formation continues to be a meaningful pursuit.
- Monitor regularly the cost of raising children and its affordability for average Singaporeans, and the results to be released regularly for public education purposes.
- Enable robust discussions in and outside government on the place of parenthood outside marriage especially in view of the likelihood of breakthroughs in artificial reproductive technology.



5.5 REFERENCES

- Amato, P. R., A. Booth, D. R. Johnson and S. J. Rogers. 2007. *Alone Together: How Marriage in America is Changing*. Cambridge, MA: Harvard University Press.
- Chan, D. 2001. *Attitudes on Family: Survey of Social Attitudes of Singaporeans*. Singapore: Ministry of Community Development, Youth and Sports.
- Cherlin, A. J. 2004. "The deinstitutionalization of American marriage". *Journal of Marriage and Family* 66(4): 848–61. doi:10.1111/j.0022-2445.2004.00058.x.
- Ciscel, D. H., D. C. Sharp and J. A. Heath. 2000. "Family work trends and practices: 1971 to 1991". *Journal of Family and Economic Issues* 21: 23–36.
- Cohen, P. and S. Bianchi. 1999. "Marriage, children and women's employment: what do we know?" *Monthly Labor Review* 122(12): 22–31.
- Coontz, S. 2004. "The world historical transformation of marriage". *Journal of Marriage and Family* 66(4): 974–9. doi:10.1111/j.0022-2445.2004.00067.x.
- Gillis, J. R. 2004. "Marriages of the mind". *Journal of Marriage and Family*, 66(4), 988–91. doi:10.1111/j.0022-2445.2004.00069.x.
- Hill, J., V. K. Martinson, M. Ferris and R. Zenger Baker. 2004. "Beyond the mommy track: The influence of new-concept part-time work for professional women on work and family". *Journal of Family and Economic Issues* 25: 121–36.
- Institute of Policy Studies (IPS). 2013. *IPS Perception of Policies in Singapore Survey 6: Perceptions of Singles on Marriage and Having Children*. Singapore: Institute of Policy Studies.
- Jones, G. 2011. "Late marriage and low fertility in Singapore: the limits of policy". Presentation in Kwansei Gakuin University, Nishinomiya and Waseda University, 1 and 3 August, Tokyo.
- Jones, G. 2007. "Delayed marriage and low fertility in Pacific Asia". *Population and Development Review* 33(3): 453–78.



- Kaneko, R., T. Sasai, S. Kamano, M. Iwasawa, F. Mita, and R. Moriizumi. 2008. "Attitudes toward marriage and the family among Japanese singles – Overview of the results of the Thirteenth Japanese National Fertility Survey. *The Japanese Journal of Population* 6(1): 51–75.
- Koh, E. C. 2011. The state of marriage in Singapore". In G. Jones, T. Hull and M. Mohamad (eds.), *Marriage Trends in Insular Southeast Asia: Their Economic and Socio-cultural Dimension*, London: Routledge.
- Kotkin, J., Shroff A., Modarres, A., Cox, W. 2012. *The Rise of Post-Familialism: Humanity's Future?* Singapore: Civil Service College.
- Kye, B. 2008. *Delay in first marriage and first childbearing in Korea: Trends in educational differentials*. Los Angeles: California Center for Population Research Working Paper Series, University of California.
- Lee, S. S. 2006. *2005 National Survey on Marriage and Fertility Dynamics, Presidential Committee on Ageing Society and Population Policy*. Seoul: Ministry of Health and Welfare, KIHASA.
- McDonald, P. 2009. "Explanations of low fertility in East Asia: a comparative perspective". In G. Jones, P. Tay Straughan and A. Chan (eds.), *Ultra-low Fertility in Pacific Asia*. New York: Routledge, 23–39.
- McDowell, L. 2001. "Father and Ford revisited: gender, class and employment change". *Transactions of the Institute of British Geographers* 26(4): 448–64.
- McDowell, L., D. Perrons, C. Fagan, K. Ray and K. Ward. 2005. "*The contradictions and intersections of class and gender in a global city*". *Environment and Planning A*, 37: 441–61.
- Ministry of Community, Youth and Sports, Singapore (MCYS). 2007. *Marriage and Parenthood Study*. Singapore: MCYS.
- Onishi, N. 2005. "A new Korean goal: Having a big family". *New York Times*, 22 August. http://www.nytimes.com/2005/08/21/world/asia/21iht-korea.html?pagewanted=all&_r=0.
- Quah, S. R. 2009. *Families in Asia: Home and Kin*. Second edition. New York: Routledge.
- Singapore Department of Statistics; National Population and Talent Division, Prime Minister's Office; Ministry of Home Affairs Immigration & Checkpoints Authority. 2011. *Population in Brief 2011*.



http://www.nptd.gov.sg/content/NPTD/news/_jcr_content/par_content/download_28/file.res/Population%20in%20Brief%202011.pdf.

Straughan, P. 2012. "Delayed Marriage and Ultra-Low Fertility — The Confounding Challenges to Social Stability". In *Roundtable on The Population Conundrum*. Singapore: Institute of Policy Studies.

Straughan, P. T. 2011. "Not Yet Married —The Implications of Meanings of Marriage on Youths in Singapore". *Hong Kong Journal of Youth Studies* 14(1): 113–29.

Sullivan, O. 2000. The division of domestic labour: twenty years of change? *Sociology*, 34, 437–56.

Teo, Y. Y. 2013. "Support for deserving families: inventing the anti-welfare familialist state in Singapore", *Social Politics*. <http://sp.oxfordjournals.org/content/early/2013/02/26/sp.jxt004.full.pdf?keytype=ref&ijkey=dykK5yhBzF31Yk0>.

Tausig, M. and R. Fenwick. 2001. "Unbinding time: Alternate work schedules and work-life balance". *Journal of Family and Economic Issues* 22: 101–19.

Westley, S. B., M. Kim and R. D. Retherford. 2010. "Very Low Fertility in Asia: Is there a problem? Can it be solved?" *Asia Pacific Issues: Analysis from the East-West Center* 94: 1–12.

Yap, M. T. 2009. "Ultra-low fertility in Singapore". In G. Jones, P. Tay Straughan and A. Chan (eds.), *Ultra-low Fertility in Pacific Asia*. New York:Routledge,160–80.





Chapter 6

Social Infrastructure Development



CHAPTER 6: SOCIAL INFRASTRUCTURE DEVELOPMENT

6.1 TERMS OF REFERENCE

This chapter considers the following issues with the objective of making specific recommendations, within the context of building a sustainable and inclusive society, and given Singapore's demographic trends arising from the IPS' population projections:

- Will Singapore's public-private-people hybrid of social infrastructure systems come under increased stress with rapid population ageing and decline?
- Can the goals of efficiency, equity, quality and sustainability be achieved in the systems?
- What policies are necessary to attain an optimum balance in providing, financing and regulating healthcare, social and community services, and education?

6.2 BACKGROUND

The IPS Population Projections show that if the fertility rate in Singapore continues its ultra-low trend, Singapore's rapidly ageing population will result in an old-age dependency ratio¹ of 36.9 in 2050 (from the current level of 13.0), if immigration is capped at 30,000 new residents per year (in Scenario 2).

Solving the problem of a stagnating and ageing population numerically by open immigration could bring with it new challenges, which include widening income and social inequalities and an eroding social fabric. These problems have already surfaced and are compounded by the problems of low productivity and inflation. Unless strategically resolved, these issues could become more acute in the next 40 years.

Taking a demographic perspective as the starting point is important to ensuring Singapore's sustainability as a nation, and not just as an economy. This demographic starting point puts the social (instead of economic) participation of citizenry at the centre of attention, and in turn the social infrastructure of the nation becomes crucial in building a sustainable society.

Developmental welfare was used to describe the welfare systems in the East Asian economies, where strong social development in these countries

1. Defined as the number of people aged 65 and above as a percentage of the number of people aged 15 to 64.





supports economic development (Goodman et al. 1998). In recent years, however, in the face of greater challenges in uplifting the vulnerable in society, South Korea and Taiwan have become more inclusive, for instance by greatly expanding social welfare through national health insurance and unemployment assistance.

Singapore, by contrast, has in the past stuck mainly to the developmental welfare state model of emphasising economic development (Kwon 2007). As Singapore experiences the onset of social challenges that could unravel economic progress, social development will have to take greater priority, and as an end in itself instead of a means to meeting economic goals. Social safety nets and social services will have to be strengthened and expanded. By 2050, social well-being should match our status as a mature and developed nation.

This report offers some suggestions and rationale for the way forward in developing a strong social infrastructure, which have been scoped into three main sectors: social and community services, education and health. In addition to projecting the social infrastructure needs of the population by demographic distribution, the report also makes recommendations for the reduction of social inequality and the fostering of social cohesion, in response to the challenges of rising inequality and social tensions.



6.3 SOCIAL AND COMMUNITY SERVICES

6.3.1 Background

Social and community services, or SCS, “takes care of the welfare of the aged and the disadvantaged, providing counselling and promoting volunteerism, helping to ensure social progress along with economic progress” (MSF 2009). The SCS sector in Singapore is a unique eco-system comprising a diverse mix of organisations (Cheng 2009). The system involves many parties including voluntary welfare organisations (VWOs), ethnic self-help groups, grassroots organisations and Community Development Centres (CDCs). These parties co-ordinate with one another in meeting the diverse needs of their charges, ranging from financial aid and employment services to family counselling and rehabilitation. While these are key players in social and community care, it must be noted that the larger eco-system comprises many more types of agencies; agencies such as social enterprises, corporate organisations with elements of social objectives, and religious organisations can be considered part of it.

SCS run on the principles of self-reliance and “many helping hands”. These principles reflect the historical development of social and community care through mutual help systems, or *gotong royong*, among communities and clan associations. The principles have also been emphasised by the government in a non-welfare state so that individuals will rely on themselves and their families as the first line of support instead of on welfare aid. The principles also apply to VWOs, where these organisations are seldom fully funded by the government, but have to tap on various sources of funding including the Community Chest and the organisation’s own fundraising efforts. Based on these principles, the government partners with SCS by subsidising organisations and funding programmes that are delivered through VWOs and not by the government itself. The government assistance programmes provided through the CDCs are means-tested.

The *modus operandi* of government support through highly subsidised social infrastructure and services is aligned with the developmental welfare state model typified by Goodman et al. (1998). Government investments in housing, healthcare and education build a social infrastructure that is conducive for foreign investments and economic development. Economic growth enables a hardworking workforce to be self-reliant but will be supported by many helping hands should one fall into hardship. Therefore, the SCS sector plays a secondary role to the primary objectives of economic development, to remediate where individuals whose needs are not met by the main system are served. Examples of such areas are special education and people with disabilities, as well as areas where negative consequences



of the primary systems need to be tackled, e.g., integration of a large pool of foreigners in view of an open immigration policy.

6.3.2 Analysis

Today, Singapore has one of the highest levels of income inequality in the developed world. The global challenges that have driven the inequality originate largely from depressed wages of the lower-educated and lower-skilled. In such a climate, a liberal welfare model, a developmental welfare state, and the principles of self-reliance and “many helping hands” need serious rethinking, as they may serve to exacerbate rather than ameliorate the problems of stagnating wages and widening inequality. Self-reliance depends on the availability of and access to jobs and earnings, which have a direct bearing on one’s ability to be self-reliant. This ability is greatly challenged in the current global context.

In the last seven years, Singapore has greatly expanded welfare provision. A range of workfare programmes were introduced, e.g., the Workfare Income Supplement, Work Support Programme and other ComCare assistance, and existing financial assistance programmes expanded. Government budget for SCS has also been increasing from year to year. However, Singapore’s safety net system remains largely residual in nature, with FY2011 public spending on social sectors (i.e., healthcare, education, community and family services and employment) representing 5.5% of GDP in 2011, compared with the OECD average of 22% in that year.²

One major economic inefficiency resulting from the non-profit nature of SCS is market failure. SCS depend on third-party funding. Therefore, the invisible hand of the price mechanism that results in the matching of demand and supply is absent. With SCS serving largely a clientele with limited means, clients are not able to signal demand by their willingness to pay. Outcomes in SCS are also hard to measure, unlike in commercial products where outcomes translate into profits. Funding does not respond directly to client needs or outcomes, but to what appeals to funders. As a result, SCS are generally under-resourced, and inequity in resource allocation is inevitable (Cheng 2009; Ng and Sim 2012).

2. Singapore’s public spending on social services is computed from the government budget allocations for the Ministries of Education (MOE), Health (MOH), the then Ministry of Community, Youth and Sports (MCYS) and Manpower (MOM) for FY2011, and compared with nominal GDP of S\$326.8 billion in 2011. OECD public social expenditure data is from OECD 2012 paper on “Social spending after the crisis” (OECD 2012), including public expenditure on four broad social policy areas, i.e., pensions, income support to the working-age population, health and other social services such as spending on active labour market programmes.



The diverse types of organisations in the eco-system of the SCS sector also make co-ordination difficult. Further, with the belief in many helping hands and a residual approach to assistance, needy families have to apply to individual programmes to show that they deserve that particular type of service. For example, a branch of CDCs disburses the government financial assistance schemes under Ministry of Social and Family Development (MSF).³ Employment assistance is handled by another branch in CDCs funded by the Ministry of Manpower, counselling and case management by Family Service Centres (FSCs), and financial and social assistance related to medical services by hospitals and the Ministry of Health. There are also other financial assistance schemes provided by different agencies, e.g., the ethnic self-help groups and FSCs, which can be accessed either in addition to government assistance or when families do not qualify for government assistance. The upside is a range of programmes available, but the downside is inefficiency, with overlapping services in some situations and gaps in others. To some extent, inefficiency is inevitable in this sector, but to a large extent inefficiency can be reduced by rethinking the philosophical underpinning of social and community care.

Besides inefficiency, the current “many helping hands” (MHH) approach inadequately addresses the multiple challenges faced by modern families in an increasingly complex and interconnected world. A plethora of separate and independent programmes does not gel with the reality that the family is one entity experiencing different types of needs simultaneously and in interaction. Therefore, the different challenges faced by a family unit need to be dealt with holistically through increased integration and merger of services.

While a referral system is in place, the onus ultimately lies in the resourcefulness (and self-reliance) of individual families to go to different agencies and apply for assistance, often an undignified process for the beneficiary. The government has embarked on a whole-of-government approach to service delivery, an important step to enable applicants to reach the required services no matter which point of entry they start off with. It remains to be seen whether this approach and the introduction of Social

3. Most ComCare functions will be taken over by Social Service Offices (SSOs) to be distributed throughout Housing and Development Board (HDB) towns (source: MSF Press Release 14 March 2013 on “Social Service Offices to be set up in HDB towns to strengthen delivery of social services to needy Singaporeans”: <http://app.msf.gov.sg/PressRoom/SocialServiceOfficestobesetupinHDBtowns.aspx#sthash.UFUORvO2.dpuf>).



Service Offices (SSOs) will result in real integration of services, but moving forward, greater integration of services is required.

The potentially acute manpower shortage in this sector therefore needs to be urgently addressed. Disparities are evident between well-resourced and not-so-well resourced VWOs in the ability to hire and retain staff. Low pay persists in this sector despite acute manpower shortage. Efforts towards improving the image and professionalism of the sector have begun with social workers, where the MSF has introduced salary revisions, accreditation and professional development schemes. However, the initiatives have so far helped to reduce the gap between salaries of social workers and other professionals while still keeping social workers' salaries at the bottom among professionals in non-social service sector jobs (Ng and Sim 2012). The initiatives have also resulted in disparity between social workers and other social service professionals.

Following worldwide trends, Singapore has also adopted outcomes management and strengthened regulation to address “market failure” problems:

- Many funders require proposals stating intended outcomes that act as key performance indicators on which continued funding is contingent. The National Council of Social Service (NCSS), an umbrella body with oversight of the majority of VWOs, runs an Enhanced Programme Evaluation System (EPES) for the VWOs under its jurisdiction.
- For better accountability, funding has moved away from “block” funding to programme-based funding.
- In 2007, the Charity Council introduced a code of governance, which serves as a guide for charities, on a comply-or-explain rather than a mandatory basis. The code provides a framework for how charities are to be run and also “helps charities to be more effective, transparent and accountable to their stakeholders” (Charity Council 2011).

The role of the government in SCS can perhaps be described as invisible but very present. It does not provide services directly, but its subsidies, conditions and planned programmes mould how services are delivered and how agencies are run. Such centralisation provides for more efficient management of the sector, though not necessarily more efficient delivery of services. However, for an increasingly educated population in a developed nation that is contending with greater social challenges, such centralisation of power is too hierarchical and heavily concentrated on the central planner.



Overly centralised and bureaucratic government intervention may lead to “government failure” and other administrative problems. Examples include:⁴

- Skewed incentives to meet key performance indicators, which at times compromise true welfare outcome, e.g., closing cases as an indicator.
- Prescribed service models lack flexibility to respond to ground issues because changes must be top-down to tweak requirements, e.g., programme staffing ratios.
- Programme funding on a per user basis increases uncertainty of funding compared to funding on head-count basis.
- When policymakers provide programme funding with prescribed models and target populations, agencies tend to concentrate on issues and output which the policy funds, rather than actively and flexibly responding to changing needs on the ground.

These specific processes will have to give way to more sophisticated regulatory and funding practices as Singapore becomes an advanced society.

Related to the role of the government in SCS are the following considerations as well:

- Muted role of private philanthropy in Singapore;
- Real or perceived political links of certain SCS, e.g., the role of grassroots organisations and CDCs under the People’s Association;
- Tensions in the various roles and functions of agencies, e.g., CDCs as community development agencies or as providers of financial assistance, grassroots organisations in responding to residents or their member of parliament (MP), and Family Service Centres focusing on remedial case work or on preventive/developmental community work.

The SCS also suffer from a dearth of data for service planning. First, national social statistics are lacking, such as the number of people with disabilities and types of disabilities, and consistent crime trends reported by finer categories. VWOs that are supposedly experts working with vulnerable populations do not have information on trends to be able to respond effectively. There is thus a need for the government to set the direction on

4. See Ng and Sim (2012) for a detailed analysis.



collecting, analysing and publishing data that is relevant to the work in the sector.

Second, reporting of data to information systems does not necessarily lead to the data being extracted and shared. Agencies report local data but do not know what the overall statistics are. Again, agencies are on one hand unclear of where they stand and what directions to take, and on the other worried that the reported information will be used against them. MSF, NCSS and the Infocomm Development Authority (IDA) have embarked on an ICT Master Plan, a key anchor of which is an integrated data system for information sharing across agencies. This is an important move in light of the increasing needs and required integration of the sector.

Overall, the governance and funding structures of the sector — based on a residual approach emphasising “many helping hands” and self-reliance — result in inefficiencies and inadequate quality in meeting the individual and community needs of an increasingly complex society. The sector is tasked with uplifting the disadvantaged and relieving social tensions in order to bring about greater equity and cohesion but will increasingly fall short without some overhaul and recalibration. Lack of resources is also leading to inequities within the sector itself. The sustainability of the sector therefore hinges on a major review of its basic tenets and large public investments.

6.3.3 Recommendations

The first set of recommendations includes suggestions to review the philosophical underpinnings of the system:

Redefine self-reliance

- Self-reliance needs to be redefined from one that emphasises temporary and minimum help to one that emphasises holistic assistance to enable beneficiaries to gain a foothold towards self-reliance.

Broaden application of “many helping hands”

- The “many helping hands” principle is good and aligned with this study group’s focus on the individual-in-community. The defining characteristics of the individual-in-community concept are in prioritising social besides economic goals (as opposed to “individual-in-economy”), and recognising that the individual is intimately part of a community and it is important therefore not to develop just individuals, but also to develop communities.

However, a broader application of “many helping hands” should be adopted than the current micro application, for example:



- Holistic and integrated intervention can replace the requirement that an individual separately applies for different programmes.
- Full funding — inclusive of the funding partnership of government, Tote Board and Community Chest — of agencies and programmes where a strong programme evaluation system is in place can help SCS agencies to better utilise their resources in direct work.

The current regulatory and funding framework has been reasonably effective in addressing market failure. However, improvements can be made to ameliorate the resultant “government failure” problems. In moving from no regulation to programme-specific monitoring, the country has swung too far. Control can be loosened. Funding based on delivery models can be reduced in terms of specificity and reporting requirements. Some movement back to block grants or employee-based funding can be explored to encourage more ground initiatives and reduce dependence on policymakers to set trends or interventions. It allows more flexibility and responsiveness, rather than requiring specific outcomes that insufficiently capture the positive externalities that SCS entail.

Foster trust

A regulatory and funding environment that is broad and leaves specific details to agencies requires trust — trust from policymakers to do the right thing and do it well, and trust from the public that the system is fair and non-corrupt. Scandals of unethical practices have not helped in fostering this trust, and this trust has to be built now. The group’s vision of a cohesive society is a starting point in fostering a community of trust. In embracing this vision, trust and cohesion have to be sufficiently strong for scandals not to shake confidence. Any scandal has to be dealt with harshly but also tempered with the recognition that such isolated incidents do happen in any system. The challenge is balancing regulating SCS with a heavy hand or a light touch, between vigilance and blame.

The issue of trust also extends to beneficiaries. In an expanded system of help, while introducing conditions to minimise abuse, there will have to be greater acceptance of the few individuals who will try to sidestep the system and not allow them to diminish the amount of help that many other individuals need. The dignity of beneficiaries must be preserved while we screen and ration assistance. Overall, trust has to be built upon mutual responsibility based on a more open system of accountability and transparency.

De-emphasise reporting outputs and details

Reporting requirements and the resources to support the fulfilment of such requirements also need to be reviewed. Investments have to be made to:





- Provide agencies with the headcount to handle data reporting work and provide technical support, thereby releasing case workers to client work;
- Determine good key performance indicators to reduce skewed incentives; and
- Determine a core and minimum range of data to report

Overall, de-emphasising reporting of outputs and identifying various macro impacts will give agencies more freedom and bandwidth to exercise discretion in meeting outputs in order to fulfil overall impact aims. In fact, identifying concrete social outputs and impact is to a large extent impossible. Some flexibility needs to be exercised.

Establish a professional social and community services council

A professional body such as a social and community services council could provide ground leadership and standards. The council can therefore also act to address other challenges, such as:

- Ensuring standards of unfunded VWOs;
- Reducing resource disparity between agencies, in terms of size, target populations, etc.

Establish a more holistic and integrated service system

More holistic and integrated service delivery is needed for three reasons:

- Recognition that individuals and families are experiencing multiple and increasingly complex stressors in a globalised world;
- Recognition that individuals and families are one entity and therefore experience the multiple stressors simultaneously and in interaction;
- Recognition that individuals and families are more than merely functional units within an economy, and require interventions that are customised to the different needs of each individual, family and community.

Beyond the initiatives that have already begun on a whole-of-government approach and improved collaboration and referrals through the local community networks, realising a truly integrated person-centred delivery of services will require mergers in some programmes.

Towards 2050, the study group envisions a single centre and programme providing the different programmes that needy families often need in tandem,



including finances, employment, training, housing, preventive and long-term healthcare, and family relations.

Co-locate social care and other services

The study group's vision of an individual-in-community concept with strong social cohesion will require concerted efforts towards building that community. The group sees much potential in a locality approach in healthcare, education and social care. Having the different social infrastructural development in a local centre where different activities are integrated within the centre can foster greater synergies in person-centred social development. The movement then is towards localisation and away from nationalisation.

Establish umbrella ministry with oversight of social and community-related care responsibilities of other ministries

Issues of inter-ministry boundaries will have to be addressed and ministry oversight reconstituted. For example, social protection and services that currently comes under MSF will have increasing connections with economic and manpower development as the Singapore economy matures, and with healthcare as the Singapore population ages. One model to consider might be an umbrella ministry (for example an enlarged Ministry of Social and Family Development) having oversight of the social and community-related care responsibilities of other related ministries (e.g., health, manpower, community).

Community development becomes an important element that holds the social, economic and healthcare development aspects together. Outreach will therefore be crucial in building community and away from centre-based remedial work.

Some movements towards integrated facilities are currently seen in requiring commercial buildings to locate social and community agencies within them, and the development of hospitals with multiple uses besides medical services. One under-explored possibility is the school-in-community idea, which will be developed further in the section on education.

The recent introduction of SSOs in HDB towns is also a potential step towards the kind of localised integrated centre recommended by the study group. However, it is currently unclear whether SSOs should become an integrated point of call or a centre focused on financial assistance with referral to other agencies for other kinds of assistance. An integrated centre will require multi-disciplinary teams of social workers, community workers, career consultants, community health workers, etc., working with each family.



Address manpower shortage and quality issues

The acute resource constraints and manpower shortage in the sector need to be urgently addressed, not only to move towards the future vision of integrated care, but also to meet current inadequacy in baseline services. CDCs are currently inadequately equipped to handle low-income clients with multiple and complex needs. Their wide range of work in community development and financial assistance prevents them from delving deep into clients' root issues. As general degree holders without background in social services, and provided with limited training on case management, they have insufficient training for intensive work with vulnerable clients. On the other hand, staff in FSCs are professionals trained to handle needy populations — but these face acute manpower shortage.

There is an urgent need to improve the status, salary and recognition of social workers and other SCS professionals. Clear career paths and progression also need to be drawn up. More community workers and SCS professionals trained in community development will be required.

Given the complexity and multiple challenges experienced by needy families:

- Job scopes of case and community workers have to be broadened beyond narrow confines, and should be expected to be “messy” and cross boundaries. In integrated care, staff must be trained to understand the end-to-end suite of needs and empowered to handle a multitude of queries/issues and offer appropriate solutions.
- All social care professionals, including doctors, allied health professionals, social workers, financial assistance workers and volunteers should be trained in four core competencies: ethics, cross-cultural work, integrated care and work with the elderly.

Stronger administrative support — for instance in human resource, finance and data recording for VWOs — need to be developed so that the organisations can focus their energies on client work.

Share data for planning and research

To improve service planning and delivery, there needs to be greater availability and dissemination of social data. More social data and data in finer detail need to be published on a regular basis. More data should also be made available for research and evaluation.

The current development of an integrated data system needs to be done carefully with consideration for it to be used as a system that facilitates integration and more effective work, rather than as a watchdog to monitor agency and client compliance. The natural anxieties of agencies and clients



on how data sharing will be used against them need to be acknowledged. That the system streamlines work processes and not add to burdensome paper work will also have to be looked into. Careful decisions on the core information to be shared will help in addressing ethical issues.



6.4 EDUCATION

6.4.1 Background

Singapore's education system is highly regarded. It boasts a remarkably high literacy rate, which was 96.4% in 2012.⁵ Singapore students also rank high in international tests. In the 2009 Program for International Students Assessment (PISA), Singapore's 15 year-olds were ranked fifth for reading, second for mathematics and fourth for science (MOE 2010c). Many countries have studied and worked to emulate our education system. However, despite achieving remarkable and seemingly desirable outcomes, observers of our education system, including politicians, sociologists, teachers, parents, students and psychiatrists, have raised several key concerns.

The move towards a knowledge-based economy in the late 1990s required a workforce that would be prepared for a fast-paced and ever-changing landscape. This era saw the unveiling of "Thinking Schools, Learning Nation", which defined the need for Singapore's people to be prepared for life's challenges and to learn continuously to ensure the future sustainability and wealth of the country. Since 1997, ability-driven education saw the introduction of more tracks, alongside the Normal and Express streams in secondary schools, which would lead to the GCE 'O' Level examinations. The Integrated Programme (IP) was introduced in the Express stream, which allowed for the bypass of the GCE 'O' Levels. Schools were encouraged and given autonomy to customise and run specialised programmes in electives such as music, art and sports.

Today, public education in Singapore comprises a network of independent schools, autonomous schools, Special Assistance Plan (SAP)⁶ schools, mission schools and government schools. Since 1988, "several well established schools were allowed to become independent of the Ministry of Education". Independent schools charge the highest fees and are granted the most flexibility in, amongst other things, curriculum, school management, reward and deployment of staff (Tan and Gopinathan 2000). This flexibility was intended to bring about creativity and innovation towards a student's learning experience. Another incentive of school management flexibility was the school's ability to attract and retain a teaching talent pool. An example of an independent school would be Raffles Institution. In the next tier are

5. Department of Statistics website at:

http://www.singstat.gov.sg/statistics/latest_data.html#16.

6. SAP schools offer students enhanced learning of Chinese language, culture and values. Students can take Higher Chinese as a subject in these schools.



autonomous schools, which charge more affordable fees, but have less autonomy over their operations. Autonomous status too was granted based on their academic results. An example of an autonomous school would be Dunman High School. The level of autonomy decreases as one moves down the categories of schools to the government schools. An example of a government school would be Ang Mo Kio Secondary School.

There are also Specialised Independent Schools, which “cater to students with talents in specific fields” (MOE 2006). Today, there are schools specialising in areas such as sports, mathematics and science, and the arts. In recent years, specialised schools for students at the bottom end of the academic achievement spectrum were also introduced. These schools run a “customised curriculum to suit the learning needs of its students” and “work closely with ITE and industry partners to develop programmes and attachment opportunities for its students” (MOE 2013). An example of such a school would be Crest Secondary School. The aforesaid types of schools listed above are funded and regulated by MOE.

There are also Special Needs Schools in Singapore, supporting children with disabilities. Such schools, unlike the other schools listed above, are run by VWOs and funded by MOE and the MSF through the NCSS. An example of a Special Needs School would be Pathlight School.

Thus, the direction the education system has taken in recent years is greater flexibility and diversity at the secondary school level, providing multiple pathways for students to meet their different interests and ways of learning.⁷ There are different streams, programmes and types of schools. Some schools offer only one stream or programme. The system allows for bridges between the different pathways so that students’ choices do not lead to educational “dead-ends”, with each path designed to be sufficiently porous so that late bloomers or those backtracking on early choices are not trapped. However, in reality, the likelihood of switching actually happening may or can be low.

The main assessment for sorting students into the different pathways at the secondary school level is the Primary School Leaving Examination (PSLE), taken when students are in Primary 6 (at around age 12). Although primary school education is less differentiated than secondary school, many schools practise their own ability-based tracking by classes. At age nine, all Primary 3 students would be tested for giftedness (unless they opt out of the testing), with approximately 400 students (estimated at the top 1% of the cohort) being pulled out of mainstream education into the Gifted Education

7. Retrieved from MOE website, <http://www.moe.gov.sg/education/>.



Programme (GEP).⁸

In summary, some defining characteristics of Singapore's education system that has been lauded for the high quality of education and students include:

- Investments in national curriculum planning
- High quality teacher training and competitive remuneration to ensure highly qualified teachers
- National examinations to test ability
- Many pathways to success through ability-based streaming, and different school types and programmes

6.4.2 Analysis

While decentralisation of school management has led to greater diversity in curriculum and teacher training, the national education policy ensures conformance to a core curriculum and the National Institute of Education remains the educator of the majority of teachers, thus setting a high bar for all school types. Besides, the schools with greater autonomy from MOE are also schools that have more resources and capabilities. They are therefore able to achieve even higher standards than the bar set by MOE.

The educational development in Singapore reflects the corporatisation and marketisation of education that Lee and Gopinathan demonstrate has taken place due to globalisation. "The movement from centralisation to decentralisation is concomitant with the growth of marketisation in education with an emphasis on competition and performance indicators which enables the government to change its mode of regulation from direct control to 'steering from a distance'" (Lee and Gopinathan 2005, 266).

Examples of market mechanisms applied in education include first, Direct School Admission (DSA), which gives secondary schools and junior colleges greater discretion in student recruitment; and second, the ranking of school performance that is published in the newspapers, which has since been scrapped. The increased competition resulted in schools beginning to expend energies towards marketing themselves based on the ranking or other niche areas (Tan 2010).

8. Retrieved from MOE website,
<http://www.moe.gov.sg/education/programmes/gifted-education-programme/faq/gep-pupils/>.



Another important ideology on which Singapore's education system is built is meritocracy, where students are rewarded according to their academic performance. For example, students are assigned to schools and streams based on their PSLE results and admitted to post-secondary institutions based on their 'N' or 'O' Levels results. While meritocracy is often interpreted as helping to level the playing field because it rewards based on ability and not on other metrics such as family wealth, meritocracy as applied in a streamed system such as Singapore's functions more as a sorting mechanism than a leveller.

This sorting function was stressed in the early beginnings of nationhood. In a speech to school principals in 1966, then Prime Minister Lee Kuan Yew "stressed that the education system ought to produce a 'pyramidal structure' consisting of three strata: 'top leaders', 'good executives', and a 'well-disciplined and highly civic-conscious broad mass'" (Tan 2010, 297–8). This sorting role of education has also been theorised as "sponsored mobility" by Turner (1960) in his description of the education system in the United Kingdom. The goal of sponsored mobility is to optimise talent by "sort[ing] out early in the educational programme the promising from the unpromising so that the former may be segregated and given a special form of training to fit them for higher standing in their adult years" (Turner 1960, 861).

In contrast, in a system with "contest mobility" which in 1960 was illustrated by the American education system, elite status is the prize won in an open contest, based on the "aspirants' own efforts" (p.856). Turner's sponsored mobility of 1960 continues to be an apt characterisation of Singapore's education system, although pundits may now have a different name for it. For example, Low (2013) described Singapore's approach (not just in the education system) as "trickle-down meritocracy" as it sees "the growth of the economy and the progress of society as driven by its elite, by its best and brightest", and therefore "channels a large share of resources and opportunities to its high performers and talents".

Stressful competition, inequality and immobility

From the description above, it looks like efficiency has been a key aim of Singapore's education system — efficiency in terms of reducing wastage of school drop-outs, wastage of talent not being groomed to their best potential, wastage of non-competitive schools not striving to improve student performance, and wastage of not sorting students into specific tracks to suit their aptitudes. While the aims are laudable, it is clear that equity has not been a key concern. Yet, equity has become a major challenge of the system.

There is growing concern that this highly differentiated system based on



high-stakes examinations is overly competitive and resulting in greater inequality and lower social mobility. These unintended consequences are actually not as “unintended” when informed by social science theories, and they need to be incorporated into the main planning of our education system.

There are a few possible reasons and longer-term effects of the hyper-competitiveness, inequality and immobility. First, repeated studies overseas have shown that streaming or tracking (and in extension greater differentiation in educational pathways) lead to more unequal outcomes, and possibly lower average outcomes (Brewer and Kramer 1985; Hanushek and Woessmann 2005; Hindriks et al 2010; Meighan and Harber 2007). The PISA also shows that compared to the OECD average, Singaporean students’ scores were more unequal and more dependent on parents’ socio-economic status, along with other countries that also had more differentiated education systems, such as Belgium and Australia. Countries with uniform and public education such as Korea, Finland and Norway, were more equal and depended less on parents’ socio-economic status than the OECD average.

Research out of the United Kingdom (Machin 2007), China (Yeung 2012) and Hong Kong (HKIE 2013) suggest that expansion of tertiary education results in a wider educational achievement gap between rich and poor students, because richer students are better able to access the expanded tertiary education. Singapore should bear the lessons from overseas in mind in how Singapore expands tertiary education.

Second, there has been increasing concern that increased decentralisation and differentiation in the education system reduces social mobility. Studies on cohorts who were in the Singapore school system during the 1980s and early 1990s — who therefore experienced only the beginnings of the increasing differentiation of the system — indicate that for these cohorts, intergenerational mobility, or the extent to which a person’s earnings depended on parents’ earnings, were at most moderate (Ng 2013c; Yip 2012). Ng (forthcoming) further posits that intergenerational mobility will be of increasing challenge due to three political economic factors: wide and widening income inequality; a residual welfare system; and a differentiated education system. More particularly, overseas theoretical and rigorous empirical research show that intergenerational mobility is lower when the education system is more differentiated, private in nature and regressive in its spending (see Pekkarinen et al. 2009; Ng 2013c) — characteristics that Singapore’s system has increasingly moved towards.

Third, the multitude of school types and pathways has led to strategising amongst many parents for the best schools and best pathways for their



children. Aggravating the high stakes of making the “right” choice at age 12 is the narrowness of the sorting criteria that is applied at this age; the PSLE is based on academic performance in four subjects: English, Mathematics, Mother Tongue and Science, with students assessed on a bell curve. This leads to tremendous stress over an examination taken at a young age. Students and parents alike may often perceive the PSLE as a most pivotal milestone with lasting consequences. Despite official claims that all schools are good schools, there is a rush for a few preferred secondary and primary schools. Huge parental involvement and strategic planning in a child’s educational journey has built up frenzy during the annual Primary 1 registration exercises, PSLE examinations and Secondary School selection. With basic lessons at school no longer viewed as sufficient, teachers are giving remedial classes and homework exercises while parents are sending their children for additional tuition, such that students are spending long hours at school followed by homework and tuition.

While inequality, immobility and parental strategising are not the intended outcomes for the design of the education system, social science theories inform that they are expected interrelated outcomes of creating categories of students. Ng (forthcoming) posits three theoretical reasons. First, based on labelling theory from sociology and social identity theory from psychology, differential labels assign prestigious or stigmatised tags whenever categories of people are created, leading to self-fulfilling prophecies of those categories becoming more prestigious or stigmatised, and eventually even resulting in people behaving according to their labels. Second, differential resources result because the more prestigious schools will attract more resources and the less popular schools less resources, leading to greater inequality and immobility, and even more parental strategising. Whether prestigious schools have more resources originally or subsequently, the resource advantage makes them more able to invest in students for better outcomes. Third, the resulting inequality in the make-up of the different streams, programmes and school types result in different networks of friends, parents, potential employers, and even potential spouses (Homlund 2008) that are instrumental to current and future successes.

Given the above support from international comparisons and social science theories, parents’ fears of the consequentiality of primary and secondary school admissions and PSLE examination results are therefore perceived as well as real. Parents’ anxiety and strategising feed the inequity further, leading to cumulative advantage and disadvantage as not every school and parent has the same level of resources. Schools themselves recognise the benefits of being at the top of the pack and seek to secure their “preferred” positions vis-à-vis other schools so as to attract and retain the “best” talents amongst teachers and students. The success that schools have in doing so



further cements their status as graduating alumni get stronger and funding increases for the next generation of students.

The inequality and frenzy have also filtered down to the preschool level, where parents with means would send their child to expensive preschools. In comparison, parents from low-income families might not send their children to preschool at all. Overall, a study on preschool education in 2012 found the quality of preschool education to be lacking in Singapore, with Singapore scoring a rank of 29 out of 45 countries.⁹ Rightly, the government has recognised the need to intervene in preschool education to level the playing field. Based on research on the importance of early education (Heckman 2006), the current efforts are necessary and crucial. However, the study group believes that much of the inequality and preoccupation with sending children to the “right” preschool is also driven by the anxieties parents have over giving their children an early head-start for the competitive primary and secondary school systems. Therefore, going forward, addressing the issues in the main system is paramount to addressing inequities in preschool.

Long-term consequences

There are three possible longer-term consequences of an education system that is overly competitive, with reproduction of inequality and immobility: social segregation, lower empathy and lower connectedness with community.

With early streaming into specific school-based tracks, students are mixing mostly with students that have profiles similar to their own, e.g., the best class/GEP/ Foundational Class/Normal Stream/Arts School. A *Straits Times* article reported that more than 50% of students in top schools like Raffles Institution and Nanyang Girls High School have fathers who were university graduates whilst only 7–13% of students from neighbourhood schools had graduate fathers (Chang 2011). It has also been said that the introduction of SAP schools has led to a *de facto* ethnic segregation, such that Malays are under-represented in the top secondary schools (Tan 2010). Hence, one consequence of such fine tracking is prolonged social segregation of students by interest, academic ability, socio-economic status and ethnicity.

As a result of our children experiencing prolonged periods in segregated streams and schools, it would be no surprise that Singapore's young would find it hard to identify and empathise with people who are different from them.

9. See “Starting Well: Benchmarking Early Education across the world”, a 2012 report by the Economist Intelligence Unit commissioned by the Lien Foundation. http://www.lienfoundation.org/pdf/publications/sw_report.pdf.



In fact, the hyper competition based on relative positions motivates students' efforts towards individual gains rather than collaborative community good.

A similar phenomenon can be observed at the school level, where marketisation and focus on the delivery of results have resulted in schools being disconnected from the community at large. Unlike in the past, when schools were part of the community (and village heads were the principals), schools today are largely disengaged from what goes on in its local community. Being part of the neighbourhood is no longer important to schools. The compulsory community involvement programme (CIP) generally brings students overseas or controlled and specialised settings within Singapore (e.g., old folks' homes), which does little to engage students and teachers with the needs in their locale.

In recent years, MOE has taken steps to reduce the emphasis on academic competition towards greater inclusivity. In 2008, MOE set up the Primary Education Review and Implementation (PERI) committee, followed soon after by the Secondary Education Review and Implementation (SERI) committee. The committees made recommendations that would develop students holistically and better prepare them for the future. Lim observed "the strong egalitarian emphasis on levelling up" (2012, 42). For example, recommendations in the PERI such as recruiting only graduates to teach in primary schools, providing language facilitators in primary schools to ease students' transition from homes that use predominantly mother tongue languages, and the de-emphasis on academic examinations at primaries one and two were felt to be more beneficial to students from working-class backgrounds. In the SERI, one recommendation included the setting up of specialised schools for Normal (Technical) students.

Other initiatives towards greater inclusivity and well-rounded educational development include a greater emphasis on ramping up the quality of Special Needs Education in recent years, and an Edusave Character Award to reward students for exemplary character and values in 2011.

At the school level, banding for secondary schools has been removed and they are now encouraged to develop their individual niches beyond academics. Minister for Education Heng Swee Keat suggested in a speech in December 2012 during the appointment ceremony of new principals that principals should not be unduly focused on winning awards and on aggressive inter-school competition. Principals at the ceremony were encouraged to lead by example and make efforts to collaborate (Heng 2012).

The theoretical and empirical arguments on inequality and immobility presented in this report suggest there should be some dismantling of



multiple pathways, review of examinations, and movement away from market-based accountability structures. In a *New York Times* article, education sociologist Sean Reardon observed that the widened disparity in students' academic performance in the US has been due not only to the rich-poor gap but also to the increasingly rich-middle class gap. Taking a leaf from the US experience, where school types have greatly diversified and parental investments in their children's learning activities are disparate, more systemic educational reforms might be required than remedial efforts propelling the most disadvantaged students forward.

The effects of inequality, over-competition and segregation could undermine the efficiency intents of the system. Low (2013) calls the strategising by parents a wastage that has resulted from an over-emphasis on sorting based on relative performance. The long hours that Singapore students spend in school and additional tuition call into question the efficiency and cost-effectiveness of remedial lessons and extra coaching, especially when contrasted with Finnish students. Finnish students spend one of fewest number of hours in school among developed countries (Rather 2012), yet have consistently come up tops in PISA, out-ranking Singapore students in reading and science in 2009 (Ng 2013b). It is therefore unclear that streaming and competition in the school system are key factors to high performance. Rather, other traits such as curriculum planning and teacher quality, which the Finnish education system also shares, might be more important factors.

Given the plethora of differentiated paths that segregate students, the marginal benefits of continued specialisation are bound to diminish and marginal costs have already surfaced and will continue to increase. This cannot be a sustainable model for Singapore's education system in the long term, and can only give rise to greater social stratification and tension. Unless conscious steps are taken to encourage more interaction among children, Singapore risks a gradual decline in social cohesion for generations to come.



6.4.3 Recommendations

The aims of the recommendations for the education system are focused on:

- Increasing priority on education's role in fostering social cohesion, reducing inequality and improving social mobility
- Decreasing strain of an overly competitive system

System-level recommendations

Decrease differentiated pathways

The study group has argued that the main reason for the ill effects highlighted in this report is the ability-based segregation of students into many pathways. The main direction then is to move towards less streaming and more mixed schools in terms of student abilities and backgrounds. This is fundamentally in the opposite direction from the current trajectory, and an immediate step is for MOE to review and pull back from introducing more new programmes and specialised schools.

By 2050, the study group envisions classrooms with small class sizes of mixed types of students and two or three teachers working together in each class to tailor the teaching to each student's learning needs. In such a classroom where teachers know each student's standard well, there is less need for national examinations to gauge student competence. The group feels that such a vision is not far-fetched for an advanced economy that Singapore will be in 37 years' time.

Towards this type of classroom, streaming will in time have to be deferred and programmes such as IP and GEP will have to be dismantled. If we believe the GEP model of pedagogy — with more project work, deeper questioning and discovery — is superior, then the issue for improving social mobility and reducing inequality is not how to “dumb down” but how to level up. In the transition, there may be some element of “robbing Peter to pay Paul” but our longer-term vision must be to create a world-class experience for every child.

Hence, the study group recommends the postponement of streaming¹⁰ to age 16, when students choose either to enter junior colleges, polytechnics or institutes of technical education. Unlike the Finnish system, which does not have national examinations till age 18, PSLE can be retained but only to

10. Because this is a rather major change to the education system and will require more deliberation on the effects of doing so, a key consideration would be how to do it in a way that is least painful.



assess if students have attained the competencies required of a 12-year-old to progress to secondary school.

Primary schools can then teach a wider spectrum of core competencies instead of over-emphasising academic results via PSLE. Under the above types of school environment, the study group believes that MOE's goals to nurture "each child" in competencies for the 21st century can be realistically achieved rather than left as an idealism. These competencies, which broadly encompass confidence, self-directed learning, active contribution and concerned citizenship, can and should be developed in every child (MOE 2010).

School-level recommendations

Channel more resources to weakest schools

Given the current competition between schools and the clamour for better schools, the study group recommends that the Ministry signals its commitment towards making "every school a good school",¹¹ by starting a plan of action to channel more resources to schools assessed as the weakest. For example, MOE could send the best teachers to disadvantaged schools and schools that show up at the bottom of the charts, and inject additional resources and support services into these schools to help them level up. The group believes that such a move will not stigmatise schools or lead to a "race to the bottom" in an educational management climate that emphasises collaboration and support.

Prioritise remedial help to weakest students

Similarly, within each school and classroom, remedial help should be prioritised towards the weakest students with the support of allied educators, teacher assistants, and even peer teachers. Peer teaching has been found to be effective in the learning for both the peer teacher and peer learner (Annis 1983; Britz 1989; Maheady and Sainato 1985; Lien 2013) and may be an under-utilised resource in mainstream education.

Review what is core to meeting holistic educational needs

To complement the efforts to improve disadvantaged schools, it is also useful to review what is at the core of meeting the holistic educational needs of a child and to put in place some regulation in the differences in facilities and resources between schools. For example, some schools boast 50-metre lap pools and clinical psychological services whilst others are more basic.

Develop "school-in-community" principle

11. Retrieved from MOE website, <http://www.moe.gov.sg/initiatives/every-school-good-school/>.



The group recommends the further development of a “school-in-community” principle where schools become engaged partners of their local neighbourhoods. The relationship between the school and community takes place in both directions. The school-in-community relationship sees the school being involved in various types of community activities, for example, the outreach project “Community in Bloom” can see more school involvement. Schools can create student ambassadors to represent the school in different community events. Conversely, a “community-in-school” relationship is about the community being involved in the school. The tie-up between the Singapore Sports Council (SSC) and schools has enabled over 200,000 regular users of the schools’ facilities. There is more scope for school facilities to be shared with the community, e.g., shared library and cafes, and for neighbourhood residents to be involved in the school, such as school celebrations at the start of the school year, fun fairs, drama nights, etc. The composition of school boards could be required to include members of the community where the school is located. While the school principal would have direct control over curriculum and staff matters, the school board could complement this role through its recommendations on the school’s involvement in the community, integration matters, support for the needy, and a number of other social and community issues.

Over time, the fostering of the school and community nexus will enable the intertwining of school histories with individual and family biographies, bound by formal and informal responsibilities, strengthened by interpersonal networks, and reinforced by shared values (Ho 2006, 98). Thus, the school-in-community idea has the potential to meet multiple aims of this chapter, including:

- Developing students holistically in the 21st century competencies — that students become confident and concerned citizens who contribute actively to their local communities
- Reducing segregation and fostering commonality and understanding through shared experiences
- Strengthening community and social cohesion
- Saving space through the sharing of resources and facilities in land-scarce Singapore



Recommendations for staff

Review training, assessment and remuneration of principals, teachers and allied educators

The reorientation of the education system from academic excellence to holistic development, and from testing and sorting to collaborative progression, will require changes in the training and assessment of principals, teachers and allied educators. The current efforts to steer principals away from over-emphasising examination results can be enhanced by redesigning the regulatory and management framework of schools and teachers to one that encompasses more egalitarian goals and thereby giving more rewards for gains in building character, helping weaker students and fostering co-operation besides high academic attainment. Although these goals are less measurable for accurate assessment of teacher performance, the group believes they are more sustainable in the long term, as they build on the ideals of the teaching profession.¹² The group hopes for an accountability structure that relies less on market-based principles and methods, and instead is based more on collaboration and mutual trust between MOE and the schools.

High-quality and centralised teacher training and curriculum development will continue to be key. Not only do they sustain high academic standards, they should now also aim towards preparing teachers for the future classroom, such as teaching in mixed settings, individualising teaching to each student, fostering peer learning and applying knowledge to life and personal character instead of examinations.

In recognition of the important work of educators in developing the future generation, remuneration of teachers must continue to be competitive. In addition, to truly signal education's priority on redistribution, helping weaker students and developing students more holistically beyond academic performance, the group recommends that allied educators and school counsellors should be given the same remuneration as teachers. The current pay scale where teachers are paid more than the other educators signals a priority towards academic performance. More administrative support should also be provided so that teachers can focus on teaching.

Recommendations for post-secondary education

Review educational targets taking into consideration equity issues

Singapore's plans for post-secondary education, as laid out in the recommendations by the Committee on University Education Pathways

12. Teachers' Pledge retrieved from <http://www.moe.gov.sg/about/>.



Beyond 2015 (CUEP), are bold and forward-looking. Taking a leaf from overseas findings on the inequity effects of tertiary expansion, the study group wonders whether the magnitude and speed of expansion of university places might compound the inequality effects embedded in our current system. It urges a review into moderating the targets by taking into consideration equity issues. More thought must be given to expanding tertiary education in a way that first increases access for students from poorer families, and second, does not create many different elite and stigmatised paths. Already, there are murmurs from private school students claiming that they are stigmatised by potential employers who prefer graduates from mainstream universities (Chia 2013). At the other end of the continuum, in the chase for international rankings, Singapore's main universities might overly differentiate themselves on specific programmes, resulting in exclusivism and elitism. We must remind ourselves that ultimately the main role of our public universities is to provide the human capital needs of the nation.

In terms of numbers, that half of future generations are university graduates may lead to two scenarios of social concern. First, there may not be enough jobs requiring degree holders. Hence, degree holders from elite programmes at top universities may be highly sought after while others from less prestigious institutions are considered second-class and have difficulty finding degree-level jobs. The aspiration for a degree may therefore lead to disappointment. Brown and Lauder posit that in the global auction for high skills, "learning may not meet [Singaporeans'] earning expectations given the increasing supply of graduates both in Singapore and beyond" (2012, 45). Second, if half of future generations have university degrees, then young adults with polytechnic and ITE diplomas would become minorities. As minorities, the stigma for these diploma holders might worsen.

While the study group suggests caution in numeric targets of the types of post-secondary educational qualifications, there are two sectors that require government intervention and concerted efforts to ramp up the number of trained staff. First, local participation in vocational occupations such as electrical works, plumbing and carpentry, have hollowed out due to the low wages and status ascribed to them. This is not a tenable situation — Singapore cannot continue to depend on foreigners to fill the gap for such professions that all society needs. Along with the current wage restructuring, concerted efforts are urgently needed to greatly improve the image of the hollowed-out skilled trades; and more generally the image of an ITE diploma. Instead of shrinking the proportion of ITE places — as a result of expanding the proportion of university places — the government could signal its commitment to and value of technical education by continued investments in ITE that are comparable to its investments in university education.



Second, in light of the manpower shortage and needs in healthcare and social care, post-secondary education will also have a key role in directing manpower towards these sectors and help raise their professional image and standards. The increase of trained professionals at degree, diploma and certification levels requires government intervention now to meet current shortage as well as expansion in future. Similar to hollowed-out vocational jobs, jobs in these sectors, e.g., social work, counselling and nursing have lower status and remuneration. These essential services that meet public needs require government intervention to educate the public about the value of these jobs and set benchmarks on their remuneration that matches other professions.

Singapore already has a strong Continuing Education and Training (CET) system. It can be better utilised to inject flexibility in post-secondary educational pathways, so that one is not dead-ended into a particular profession and mid-career switches can be possible especially into sectors that require more manpower at certain points in time. To meet these objectives, the CET system should be complemented with post-secondary institutions to (Raffe 2003):

1. Build and strengthen pathways between ITE and polytechnic, polytechnic and university, and even university and ITE (to allow for people wishing to switch from academic to vocational careers)
2. Broaden pathways (allowing for multiple entries based on different certifications, experiences, job skills, etc.)
3. Defer decision points (e.g., by allowing young people to take time off for internships, more flexibility in allowing for gap years)
4. Lengthen education pathways (e.g., allowing the return to study by working adults through work-study arrangements at universities and polytechnics, on-the-job training through partnerships between ITE and potential employers)



6.5 HEALTHCARE

6.5.1 Background

Singapore's healthcare system has received high accolades globally, particularly since the World Health Organization proclaimed Singapore's healthcare system the sixth best in the world in 2000. The World Health Statistics 2011 also ranked Singapore fourth highest for life expectancy at birth (82 years). Notwithstanding these robust health metrics, Singapore spent only 4% of GDP on healthcare services in 2010, less than half that of the United Kingdom (9.6%) and less than a quarter that of the United States (17.6%).

The relationship between health and the economy is well established empirically. Better health increases a community's capacity to work, translating into higher productivity, which in turn leads to higher incomes. Good lifetime health can extend labour force participation and sustain the vitality of the workforce despite ageing trends. In the reverse direction, a well-performing economy also enables higher healthcare spending and therefore better health.

Singapore's public healthcare system is widely considered as well designed and financially sustainable. The combination of subsidies in the public health sector and the "3M" system of financing — Medisave, or personal savings; MediShield, or personal insurance; and Medifund, or means-tested government assistance should Medisave and MediShield be insufficient — ensures that a large majority of Singaporeans have affordable access to good healthcare while still providing a certain level of patient choice. State ownership of public hospitals as well as a dominant role in the availability and supply of healthcare helps to contain cost pressures.

The government's philosophy on healthcare financing is based on a cost-sharing concept and has four main pillars: (1) healthcare subsidies; (2) the Medisave and MediShield systems; (3) family support; and (4) an emphasis on individual responsibility in the past, that has been re-tuned towards a call for shared responsibility and thus to a "many helping hands" approach that is similar to that applied in social care.

The above healthcare financing philosophy based on individual responsibility and "many helping hands" are articulated by the mission statement of the Ministry of Health (MOH): "Through MOH, the government manages the public healthcare system to ensure that *good and affordable basic medical services are available to all Singaporeans*. We achieve this through providing subsidised medical services while promoting individual



responsibility for the costs of healthcare services. Our population is thus encouraged to adopt a healthy lifestyle, taking responsibility for one's own health. *Safety nets are provided*, however, to ensure that no Singaporean is denied access into the healthcare system or turned away by public hospitals because of lack of money" (our emphasis).

The MOH's mission of ensuring access to good basic healthcare accords with the definition of universal healthcare as set out by the World Health Organization. However, the universality of healthcare coverage is determined by who and what is covered, and how much of the cost is covered. Hitherto, Singapore's demographic structure with high potential support ratios¹³ and robust economic growth have allowed the individual and family to carry the bulk of the burden of healthcare with highest out-of-pocket health expenditure shares as compared with other developed nations.

The philosophy of individual responsibility and self-reliance leads to three practical implications:

- Co-payment financing limits tendencies for over-consumption of elective and discretionary healthcare services. This is probably one of the reasons why Singapore's public expenditure on health as a percentage of total expenditure remains the lowest amongst developed nations. Some, however, have argued that the strong hand of government is a stronger reason for the low levels of expenditure and consumption as well as favourable health outcomes (see for instance Lim 2013 and Phua 2011).
- Means testing in Singapore's public healthcare and long-term care sectors ensures equitable allocation of resources to those who need it most. The gross incomes and residential property assets of the patient as well as their household members are all taken into account in assessing eligibility for subsidies.¹⁴
- The responsibility for the "small bills" typically associated with primary and preventive care is left to individuals and the government focuses its intervention on structuring paying for the "big bills" that are largely hospital-based. This has resulted in the current acute care-centric system, where acute care hospitals are the central nodes around which health services are currently organised. In terms

13. The number of people aged 15–64 per older person aged 65 and above.

14. For acute hospital means testing, only individual income and housing type are factored into the means test. For community hospitals and nursing homes, means testing is referenced against the income and housing assets of the immediate family.



of financing, patients pay most primary care out-of-pocket, tertiary care is paid from mixed sources through the 3Ms, and long-term care is means-tested and mainly based on out of pocket cash, ElderShield, philanthropy and subsidies.

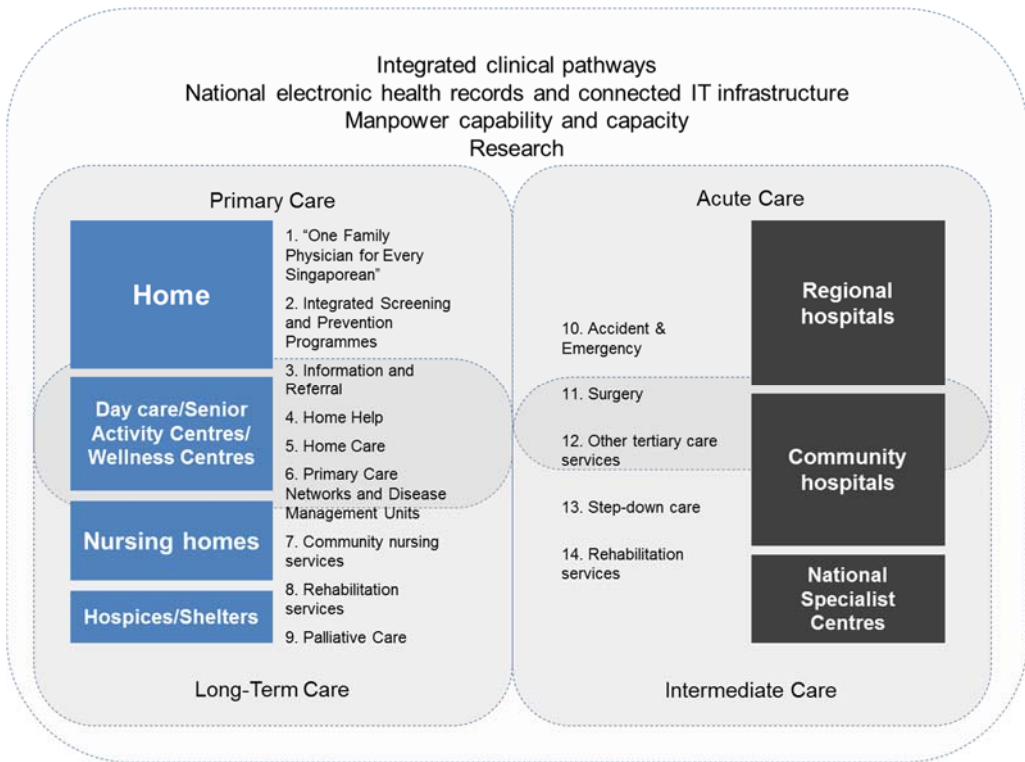
The distribution in terms of provision also roughly follows the distribution in financing. Eighteen government polyclinics provide for about 20% of Singapore's primary healthcare needs, with the bulk of primary care (80%) provided by about 2,000 private general medical practitioner clinics island-wide. In contrast, in tertiary care, 15 public hospitals and specialty centres take care of about 80% of Singapore's patients while 10 private hospitals and specialty care centres take care of the remaining 20%. Long-term care, e.g., nursing home or community-based facilities for chronic illnesses, is provided mainly by the voluntary sector, although it is noteworthy that many voluntary welfare organisations (VWOs) are subsidised by government funds, while polyclinics provide primary care for almost half of patients with chronic illnesses (Sng 2011).

Governance of public healthcare is divided into six clusters which centre on an acute-care hospital in each cluster: National University Health System, National Healthcare Group, Singapore Health Services, Alexandra Health System, Jurong Health Services and Eastern Health Alliance. They are governed by MOH Holdings (MOHH), the government's holding company of public healthcare assets.

The establishment of the National Electronic Health Records (NEHR) system will provide a common access point for medical information. It is hoped that NEHR will cover the entire healthcare continuum in Singapore (Figure 6.1). Challenges remain however with this project as the MOH has less control over private sector providers as well as VWOs that would be responsible for input as well as users of the output from the NEHR system.

Figure 6.1 An integrated care continuum





Source: Adapted from Faezah Shaikh Kadir (2011), "Role of the Multi-disciplinary Team in Integrated Care", Singapore Family Physician 37(3): 15, 17.

6.5.2 Analysis

Singapore's healthcare system will face a number of significant challenges in the years to 2050, but especially so in the next 10–15 years. Firstly, the ageing of the population will likely require increased national expenditure on healthcare. Many of those aged 65 and older in 2013 are from less educated, low-skilled cohorts born in Singapore's pre-independence period with insufficient CPF balances. Their greater healthcare costs would increase the pressure on the "many helping hands" approach and raise the need for expanded financing of healthcare as demand increases.¹⁵ Limited data is available for this "lost generation" although data from the 2010 census show there were 406,957 persons with no or only primary education aged 55 and above that year whilst 2011 CPF data show that 40% of current active CPF

15. According to the CPF Annual Report 2011, only 58.9% of active CPF members meet the Medisave minimum sum at age 55 (\$34,500 as at 1 July 2010), with average balances of \$29,928.



members do not have the \$36,000 Medisave minimum sum at age 55, equating to about 708,000 persons.

With declining potential support ratios (Table 6.1), the capacity of individuals and families as main pillars of one's safety net may come under increased strain, requiring more assistance from the MHH approach.

Table 6.1 Support ratios in IPS' population projections: Scenarios 1 and 2

		2010	2020	2030	2040	2050
Potential Support Ratio¹⁶	Scenario 1	7.7	4.4	2.5	1.8	1.7
	Scenario 2	8.0	4.9	3.2	2.7	2.7
Parent Support Ratio¹⁷	Scenario 1	9.4	11.8	21.6	44.6	52.8
	Scenario 2	9.4	11.6	20.0	34.3	37.1

The second challenge is healthcare price inflation, which has outpaced general price increases. In the 10 years leading to 2011, the healthcare consumer price index (CPI) rose an annual rate of 2.8% as compared with the 2.0% average annual increase in overall CPI. As Singapore becomes a mature economy, rising expectations for better care coupled with advances in medical technology would raise the bar on what society considers as basic levels of healthcare, in turn putting upward pressure on costs. There are risks of supply-induced demand and Baumol's cost disease,¹⁸ as demand for healthcare services rises on the back of an ageing population.

Third, current imbalances in the public-private-people mix of provision, financing and regulation as well as in the dominance of acute-care in the continuum of health services will increasingly strain the system and worsen distributional issues. The system will need to adjust to the increased interactive complexity and interdependence in the continuum of health services. An ageing population will increase demand across the health and

16. The potential support ratio is the number of persons aged 15–64 per person aged 65 and above.

17. The parent support ratio is the number of persons aged 80 and above per 100 persons aged 50–64.

18. Baumol's cost disease is a phenomenon in the labour market, first described by Baumol and Bowen (1966), which explains the lack of growth in productivity in certain labour-intensive industries that involve significant human interaction, including *inter alia*, the performing arts and healthcare.



intermediate and long-term care services continuum both from increased incidence of “catastrophic” medical events as well as chronic ailments such as diabetes, hypertension, lipid disorders and strokes. The next few paragraphs discuss these imbalances.

The current acute care-centric system reinforces the perception that expensive hospitals are the first port of call for all healthcare needs, including trivial ailments and conditions. The limitation of the 3Ms — that they only finance hospitalisation and certain outpatient expenses incurred at a hospital in Singapore — further encourages patients to skimp on early or preventive care and only seek treatment for catastrophic events which can be fully covered under the 3M structure. This results in longer lengths of stay in relatively expensive acute-care facilities, frequent re-admissions and sometimes in the need to travel long distances for treatment. That the primary care in Singapore is financed mainly by households and employers, and not by the government, limits access to primary care especially for the less well-off. The way in which primary healthcare is financed affects the way it is structured and organised. This gap in financing has inadvertently weakened the primary care network in Singapore and is a significant limitation in the system’s capacity to deliver care in the community.

With the catastrophic “big bill” expenses mostly covered by MediShield, the higher frequency and medium impact nature of chronic and long-term illnesses limit the viability of self-funded insurance schemes to finance such intermediate and long-term care. Existing medical insurance coverage systems are not designed to cater to long-term care as the costs of chronic care accumulate over an extended period of time, possibly across a wide range of service providers and settings. Lack of inflation protection in the ElderShield programme can reduce the effective coverage provided by the programme over time.

The current acute care-centric healthcare model also leads to the under- and arguably more *ad hoc* provision of preventive care such as health screenings, public education and promotion of healthy living. With our hospital-centric healthcare system, the financing, provision and management of preventive care has been anchored by the Health Promotion Board in partnership with various types of organisations, from primary care providers to employers to VWOs. Subsidised financing appears to be *ad hoc*, depending on the campaigns that are being held with various agencies and donations. More investments in preventive care could arrest medical problems early on and prevent expensive treatment when conditions have become catastrophic. However, a balance needs to be struck to guard from over-screening and information overload, which might lead to unnecessary tests and medical procedures. The risk of over-screening can be mitigated by firmly



established clinical practice guidelines, such as those promulgated by Singapore's Academy of Medicine.¹⁹

In an acute care-centric model, mental healthcare also becomes underdeveloped. For a start, mental healthcare in Singapore is centred on acute care through the Institute of Mental Health (IMH). In addition, social care is a big part of mental healthcare, where preventive and remedial work through counselling and psychotherapy are important interventions in place of, or a complement to, medical treatment. Such social care is predominantly community-based and has therefore been provided for mainly by the social and community services sector. The National Mental Health Blueprint 2007–2012 laid out a strategic plan for “promoting primary prevention, improving the provision and co-ordination of psychiatric services, developing mental health professionals, enhancing the mental health monitoring of the population and the quality of psychiatric services, as well as promoting mental health research” (Ministry of Health 2010, 4). More needs to be done to realise these aims and an overall healthcare system that supports more community-based initiatives away from institution-based efforts will be key.

Co-payments are necessary to prevent over-consumption because they mitigate moral hazards that may arise where patients consume more than they should because someone else is paying. They are not medically hazardous in situations such as acute care and hospital services where genuine patients would not defer care. However, co-payments are less useful and perhaps even detrimental in preventive services such as cancer screening and regular diabetic follow-ups where people are already reluctant to seek healthcare due to the asymptomatic nature of their conditions. They are therefore powerful policy tools in healthcare that could drive economic and operational efficiency, enabling services to function well with reduced wastage and over-consumption. On the other hand, co-payments could result in lower aggregate levels of health and undesired long-term outcomes if bluntly and insensitively applied. Co-payments are also intrinsically regressive, with a higher burden suffered by lower-income workers.

Finally, the existence of a large private market for healthcare and growth in medical tourism could lead to sub-optimal allocation of resources between the public and private healthcare sectors. According to data in the 2010 Singapore Medical Council Annual Report, the private sector employs 40% of all medical specialists but caters to only 20% of healthcare needs in the acute hospital sector. Public hospitals supply 72% of hospital beds but

19. See the academy's “Guidelines and Consensus Statements for Healthcare Professionals”, <http://www.ams.edu.sg/policy-advocacy/guidelines-consensus-statements-for-healthcare-professionals>.



employ just over 60% of registered specialists whilst private hospitals target a growing medical tourism market (although some report bed occupancies of only 40–60%). The Primary Care Survey 2010 indicates that whilst polyclinics employ only 14% of all resident general practitioners in Singapore, they attend to 45% of patients with chronic conditions that require long-term follow-up and in general, regular medications and management of risk factors, such as hypertension, asthma and chronic obstructive lung disease, diabetes and cancers (Sng 2011). Polyclinics serve 47% of Singapore's elderly population's primary care needs and the survey highlights this as an increasing trend.

6.5.3 Recommendations for Healthcare

The study group's recommendations are outlined in three broad areas:

- Strengthening the commitment to universal healthcare
- Focusing healthcare on the well-being of patients
- Developing resources to support a person-centric universal healthcare system

Strengthening commitment to universal healthcare by improving access and affordability

Provide clear definition of government's universal healthcare coverage commitment

With a rapidly ageing resident population, medical cost inflation and technological advances, individuals and families will find it increasingly difficult to shoulder healthcare expenses without governmental and societal support. Robust, established and accepted systems and policies need to be established to decide what the state will pay for, what it will subsidise and what it will not. This is a vital policy effort for sustainability as it allows for a sliding scale of health benefits depending on the resources available at any given point in time.

Introduce basic and compulsory universal social health insurance (low-cost with no opt-outs)

This is to maximise the benefits of risk-pooling and to reduce the effects of adverse selection. Health insurance is generally not economical for the elderly. The risk-based premiums paid by the elderly is prohibitively high and most will either be unable to afford or avoid paying these premiums, leading to a lack of coverage and sub-optimal risk-pools, which would reduce the viability of commercial schemes. To ensure the largest, most effective risk-pooling, the government should establish a national social health insurance



model on a community risk-rating basis into which the entire population is enrolled, with no options to drop out of the scheme. This would be supported by central administration functionality, coupled with an underwriting commitment from a government reinsurance fund. There is hence some redistribution introduced into a universal health insurance, which could also consider setting premiums based on one's ability to pay. The existing MediShield and ElderShield programmes could be further integrated and strengthened to build the foundations for such a universal basic social health insurance system in Singapore.

Broaden coverage of the 3Ms

Coverage of the 3Ms has been incrementally expanded, and this should continue especially since technological advancement has enabled more procedures and treatments to be done without hospitalisation. To move the system more towards preventive and primary care, and also to cater to long-term care needs, individuals should be permitted to use Medisave and Medifund for a much wider range of physical as well as mental health treatment. Whilst MediShield coverage should remain primarily for catastrophic diseases, the definition of catastrophic illnesses could be broadened to non-fatal but high-impact and high-cost conditions such as cleft lip surgery or special needs care for autism spectrum disorder (ASD) children. The risks for these conditions are best pooled, and their coverage should also expand to long-term care.

Index means test to inflation

At a time of significant inflation in health and long-term care costs, inflexible means-testing thresholds could rapidly increase the out-of-pocket expenses of an increasing number of households. The absence of inflation adjustments could place considerable stress on households during periods of high inflation. Inflation indexation should be implemented for means-testing criteria, co-payment schedules and MediShield/ElderShield benefits so as to ensure rapid rises in medical costs do not diminish affordability over time.

Introduce co-payment caps

The lack of co-payment caps can significantly reduce affordability for lower-income patients as medical costs rise at rates above general wage increases and public subsidies remain unadjusted. The co-payment quantum for at-risk groups should be capped and co-payment requirements should be lifted completely for selected cost-effective preventive health measures such as mammography and pap smears. Such co-payment limits should also be more seamlessly co-ordinated with the Medifund eligibility criteria.

Make Medifund eligibility more transparent



Medifund acts as a safety net for those unable to afford subsidised medical bills after Medisave and MediShield coverage, if applicable. Medifund eligibility could be made more transparent to provide additional assurance to the segments of the population that do not have medical savings buffers. Currently, Medifund coverage is dependent on post-fact approval by a Medifund committee, resulting in a lack of certainty over the patient's liability at the time the costs are incurred. While the current post-fact approval is said to provide flexibility in granting Medifund to individuals who might otherwise not be eligible, in our recommendations to move towards a stronger universal commitment and greater support for low-income people, the less stringent criteria might make the flexibility less necessary.

Focusing healthcare on well-being of patients

Build person-centric health system

The principles of self-reliance and “many helping hands” have enabled Singapore's healthcare system to be financially sustainable. However, besides the increasing difficulty that individuals have in relying on personal and family resources to finance their healthcare needs, Singapore's self-reliance model has led to an acute care-centric model that might have sidelined patient well-being. Cost-sharing requirements also lead to burdensome administration and high dependence on the expert diagnoses and approvals of the doctor. While the group has argued that the 3M system is basically sound and can be retained with considerable broadening of its scope, there is a need to reform the regulatory and delivery models of healthcare.

Establish outcomes-based regulatory framework

Currently, financing of public health centres based on cost-recovery and of private centres based on fee-for-service incentivise seeing more patients and doling out more treatments rather than working towards improved health outcomes. Basically, *every health episode is a revenue opportunity*. A movement to an outcomes-driven performance measurement system, which is agnostic about the means of achieving health, could help spur innovations and collaborations that improve the overall health of the nation. It could also balance healthcare provision towards more preventive and primary care since chances of favourable outcomes are higher when illnesses are detected and treated earlier. Public hospitals and clinics could be financed based on national health statistics and private centres could be held accountable by requiring the publishing of their health statistics. The outcomes could be measured in terms of cost-effectiveness, thus helping to contain costs and prevent a race to achieve the highest health indicator at all costs. It can also encourage efforts to harness technology for higher productivity. No doubt, careful planning of what and how health outcomes



are to be measured would determine the success of such a financing and regulatory framework.

Shift value orientation from professional-centricity to patient-centricity

In terms of delivery, a shift in the value orientation of healthcare needs to first take place, from professional-centric (mainly specialist doctors) to patient-centric, from remedial-focused to preventive and primary care-focused, and from institution-based to community-based. Such a re-orientation in essence requires some devolution of power and responsibility from doctors to other health-related professionals such as nurses, social workers and community workers, and also to volunteer citizens. The latter are stronger touch points in preventive and chronic care, and also more accessible in the community. For example, long-term management of chronic illnesses that do not require further medical diagnosis might be more effectively managed by a friendly volunteer or community worker who is in regular contact with the patient for other social and community care needs. The modes of care could also expand to non-traditional forms such as remote care via tele- or e-services, which can be cost-effective in the local context.

Localise healthcare using a community health model

In order to realise the above shift in orientation, a localised community health model whose relationship between health services and the community could be characterised in both directions. Healthcare services could be offered along with other community services such as education and family services for the holistic care of individuals and families. The community could become more highly involved in the provision of healthcare (as described in the previous paragraph).

Co-locate healthcare with other services

The unit of healthcare provision then is not the hospital but the locality in which all the different types of social, community, educational, and health services are built and organised. This is akin to the slogan by former Health Minister Khaw Boon Wan's "one Singaporean, one family physician" but expanded and intertwined with the other services — schools, integrated social service centres, community development centres, etc. — in that defined locality. These services could co-locate, for instance, a health clinic and a community library within a school, which could save physical space as well as lead to synergistic services, such as service learning for students in the clinic or the conducting of mental health awareness talks for both students and the public in the community library.

Nationalise primary care financing



Whilst this chapter considers it appropriate for the private sector to play a major role in primary healthcare provision, it also considers it appropriate for the financing of healthcare to be “nationalised” through the increased portability and eligibility of the subsidies and services available under the Community Health Assist Scheme (CHAS). Nationalisation of primary care financing will facilitate the outcomes-based regulation of healthcare; it also makes more sense for the locality-based delivery recommended above. For example, a plan of allocation that leads to former Health Minister Khaw’s one physician per family proposal might involve a public network of polyclinics in every estate and one primary care professional team servicing every 1,000 residents. This recommendation needs to be further studied for its acceptability by private general practitioners.

Developing resources to support a person-centric universal healthcare system

Ramp up and reallocate manpower across healthcare spectrum

Given the current and expected manpower crunch, there needs to be greater direct intervention to ramp up and more effectively reallocate the supply of a whole range of healthcare professionals. Programmes to train para-professionals to undertake more standard procedures should be introduced. Given the complexity and multiple needs of a family unit, all social care professionals, including doctors, allied health professionals, social workers, financial assistance workers and volunteers, should be trained in four core competencies: ethics, cross-cultural work, integrated care and work with the elderly.

Prioritise the National Electronic Health Records (NEHR) initiative

The study group recognises the importance of information and reliable data in maintaining an efficient and sustainable health and long-term care system and believe the NEHR initiative is a significant step in boosting the system’s capacity to share information and data. From a governance perspective, a comprehensive NEHR system would permit the system to move towards a patient-centric model and also allow more reliable measurement and monitoring of health outcomes and costs. The study group therefore recommends the NEHR initiative be given priority, with incentives and penalties introduced to incentivise all service providers and stakeholders to utilise and participate in the system, and a national roll-out timeline for the launch of the data system. There should be clear guidelines on using the data in the system.

6.6 CROSS-CUTTING RECOMMENDATIONS



There are several common themes across the three areas of social infrastructure development, out of which the study group has identified a number of cross-cutting recommendations.

Set up localised one-stop centres for health and other social services

First is the recommendation of more holistic integrated services, such as localised one-stop centres where healthcare, financial assistance, employment assistance and other social services co-exist. This localisation of care will require more collaboration between ministries. Such collaboration across disciplines and organisations will become normative instead of an additional good-to-have mode of service delivery. This would help build local communities that are naturally integrative and cross-boundary.

The study group's recommendations envision the social infrastructure of 2050 to be one where services will not just be community-based, but "in-community". The school-in-community and community-in-school model steers schools away from over-competitive academic orientation towards local relevance and more well-rounded student development. The community health model moves healthcare away from institution-based acute care towards more preventive community-based care. Social and community services will have oversight of services for needy populations, including health, financial and employment assistance.

This locality focus as opposed to a national-level conceptualisation of social infrastructure has the potential to meet the multiple population needs highlighted in the beginning of this report. With the neighbourhood doctor, neighbourhood school and neighbourhood social and community centre all working together for the social well-being of the residents in that community, the "many helping hands" can be unified and empowered from within to develop children, support gainful employment for adults, engage the elderly and care for the needy. The locality-focused approach can also better integrate new immigrants and foreign workers, giving them a sense of belonging and responsibility in the local community.

Services in such a model need to be dynamic, flexible and multi-disciplinary. It will require skilled workers who are conversant with community-centred work and community development in a diverse population and across different disciplines. Each worker in this model of care will need to do less in order to do more. Caseloads will have to decrease to enable each worker to do more intensive and extensive work with each client on their various different issues.

Ramp up manpower for social infrastructure development



There is therefore an urgent need to ramp up manpower supply for social infrastructure development — an effort that will include substantial improvement in remuneration and status of all staff including allied healthcare professionals, allied educators and social services workers such as social workers and counsellors. As a society that prioritises people's well-being over economic gain, these workers must be duly recognised for their important work of shouldering the main responsibility of taking care of the well-being of persons-in-community.

In this community-centric social infrastructure that values cross-fertilisation and a continuum of care, power is more dispersed from the “experts” to frontline staff, volunteers and even the clients themselves. Under this kind of manpower distribution, experts, lay volunteers and beneficiaries themselves would come together to co-create personal and communal development, recovery and progress.

With boundaries blurred in delivering a range of services in multi-disciplinary teams to an aged population, all social infrastructure personnel should be trained in four core competencies: ethics, cross-cultural work, integrated care and working with the elderly.

Redefine self-reliance principle

Self-reliance, a key principle in health and in social and community care, needs to be redefined. The current definition of self-reliance requires temporary and small assistance so as to discourage dependence on the government. However, in the context of a mature skills-biased economy where unemployment and wage stagnation are structural, such an application of self-reliance results instead in cyclical dependence on aid. In the new paradigm of an advanced nation, the self-reliance principle would still be based on the government supporting individuals and communities to be self-reliant. However, instead of “government as a last resort”, it means helping to the point when people can stand on their own feet and be truly self-reliant. Government assistance — in using more holistic collaborative models as described above — would need to be longer-term and more generous.

The group has also emphasised a paradigm where helping those who fall behind is prioritised. In healthcare, a strong and clear commitment to universal basic healthcare with social insurance would help provide an important safety net for a continuum of care from preventive to remedial. In education, commitment of resources to “level up” the weakest students and the weakest schools, emphasising a well-rounded set of core learning outcomes for all students, would require teachers and principals to be trained and assessed on such values instead of over-emphasising academic



performance. The delay of ability-based streaming to 16 years of age, and the reform of PSLE as a broad assessment to qualify for secondary education while holding on to high curriculum standards and teacher quality, would gear education towards continued overall high student performance without the negative consequences of hyper-competition, inequality and immobility. Social and community services, for which levelling up is a core business, will be more highly regarded and well resourced, as explained in the early section of this chapter.

Extend social protection to all regardless of residential status to be truly inclusive

As a city that will continue to be highly global with a continual flow of new migrants, the study group aims for truly inclusive communities where policies and programmes extend as well to foreigners and permanent residents. Such a society would extend legal, economic and social protection to all residents of Singapore, regardless of their residential status. Such a vision would require a more moderate ratio of local and foreign-born residents to work. New residents should also be provided with services to help them integrate not only into the community of Singapore as a nation but also anchored upon by their integration into the local communities where they reside.

Apply the “many helping hands” principle more broadly

Singapore in 2050 could also apply the “many helping hands” principle more broadly. The current narrow and strict adherence to it has resulted in perverse incentives and inefficiencies. Examples include cost-recovery bureaucracy in healthcare, requirements to co-ordinate with multiple parties for one programme that is funded by multiple sources, and clients “hunting” for assistance. The locality-based one-stop centres described above as well as other recommendations in this report on less prescriptive funding provide examples of applying “many helping hands” more broadly.

The study group therefore also recommends that funding and regulation be based on their impact on well-being in terms of improvement in health, social well-being and well-rounded student development. Some of the impacts, e.g., character development and psycho-social motivation, are less measurable. Therefore, more general application of such non-tangible outcomes and a smaller set of clearly defined social goals should be accommodated. Otherwise, there is a danger of measuring narrow outputs and skewed KPIs. To make the well-being of the person-in-community the ultimate goal, Singapore must expend energies into measuring such impacts well, and through time, would get better and better at impact identification and measurement.

Provide more data for planning and research



All the above recommendations require more data sharing with researchers and practitioners for their use in trends projection, service planning and programme evaluation. More data need to be shared as published reports as well as micro-data for research analysis.

Foster more trust

All the above recommendations also require more trust in society. Currently, a blend of low government funding but heavy government control has resulted in government-dependence despite the rhetoric of self-reliance. The central planning government has been looked to as trendsetter, funder and mobiliser. Inevitably, such a strong government role results in some level of inefficiency. The current model with strong central control needs to be replaced by a model where healthcare centres, social services, community groups and schools are given more room to experiment with ways to achieve the societal impacts that are collaboratively agreed upon. Governance needs to do more macro-managing, e.g., providing the regulatory environment and support, and less micro-managing, e.g., prescribing set delivery models. The efforts to build community and in-community services could also lead to more bottom-up approaches while fostering more trust.

Society also needs to have more trust in service users. A society that chooses to have a strong social protection and to foster trust would have to expect some abuse from a minority few. At the same time, the collaborative and wrap-around manner of services that the report espouses should encourage greater knowledge and sharing between service providers and users to minimise such abuse.

To foster the trust required of a socially cohesive society, Singapore's macro environment plays an important role. Insights can be drawn from Oscar Lewis' idea of a "culture of poverty", which rejects mainstream societal values and ways (Lewis 1966). Lewis asserts that the culture of poverty develops more readily amongst "people who come from the lower strata of a rapidly changing society, and who are already partially alienated from it" (Lewis 1966, 24). One lesson from this is that pacing our speed of change — be it in terms of age profile, immigrant numbers and economic development — is critical in limiting the build-up of a culture of poverty and in building a sustainable society of trust.

Overall, government budget for social welfare will increase. The question is to what extent. While our emphasis on social cohesion and more redistribution echo the ideals of Scandinavian welfare states, the study group is not advocating for a welfare state. Instead, given the current high inequality in Singapore and the social and infrastructural strains now being faced from high immigration, fast-paced changes and high economic



demands and yet low welfare provisions, Singapore should improve social protection and rethink its systems.

Improve social protection

Some might also question how attainable our vision and recommendations are, given Singapore's current path. Can more egalitarian ideals be consistent with a migrant, Asian and socially stratified society? Our optimistic answer is yes. Singapore is currently at the cusp of social change. Inequality and division have become so wide that society appears ready for a review of the social compact. This is the time to emphasise social cohesion in policy priorities. The study group feels that there is groundswell for this. However, moving forward, citizen involvement will have to be skilfully managed in policy reforms, e.g., in establishing the extent to which people are willing to pay more taxes for a more egalitarian society.

Finally, there is a danger that the policy shift might swing Singapore's trajectory to the other extreme, where the country becomes uncompetitive and unable to attain a decent standard of living for our general population. Singapore will have to keep monitoring its policies and environment. Current policies and systems are likely to be inadequate in addressing the challenges of high inequality, low fertility and a rapidly ageing population. Inequality and low fertility are challenges faced by other countries as well, and the countries that face them did not expect this result by adopting the liberal market-oriented policies that they did (e.g., the US and China for inequality, Taiwan and Korea for low fertility). But hopefully with lessons from the past, Singapore will be better equipped to put in place a more balanced and equitable social infrastructure.

6.7 REFERENCES

- Annis, L. F. 1983. "The Processes and Effects of Peer Tutoring'. *Human Learning: Journal of Practical Research & Applications* 2(1): 39–47.
- Baumol, W. J. and W. G. Bowen. 1966. *Performing arts: The economic dilemma*. New York: Twentieth Century Fund.
- Brewer, M. B. and R. M. Kramer. 1985. "The Psychology of Intergroup Attitudes and Behavior". *Annual Review of Psychology* 36: 219–43. doi:10.1146/annurev.ps.36.020185.001251.
- Britz, M. W. 1989. "The Effects of Peer Tutoring on Mathematics Performance: A Recent Review". *B. C. Journal of Special Education* 13(1): 17–33.



- Brown, P. and H. Lauder. 2012. "How Should Singapore Respond To The Global Auction for High Skills?" In J. Sung (ed.), *Globalising Skills: Implications For Singapore*. Singapore: Institute for Adult Learning, 44–60.
- Chang, R. 2011. "Parents' Background the Edge for Students at Top Schools: MM". *The Straits Times*, 25 January.
- Charity Council. 2011. *Code of Governance for Charities and Institutes of a Public Character*. Singapore: The Charity Council. Retrieved from [http://www.charities.gov.sg/charity/council/downloads/COG/Code_of_Governance_for_Charities_-_IPCs%20\(English\)%202011.pdf](http://www.charities.gov.sg/charity/council/downloads/COG/Code_of_Governance_for_Charities_-_IPCs%20(English)%202011.pdf).
- Cheng, W. 2009. *Doing Good Well: What Does (And Does Not) Make Sense In The Nonprofit World*. Singapore: Wiley & Sons.
- Chia, S. 2013. "Private school students want more acceptance", *The Straits Times*, 23 April.
- Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. New Jersey: Princeton University Press.
- Esping-Andersen, G. 1996. *Welfare States in Transition: National Adaptations in Global Economies*. London: Sage.
- Goh, C. B. and S. Gopinathan. 2005. "History Education and the Construction of National Identity in Singapore, 1945–2000". In E. Vickers, and A. Jones (eds.), *History Education And National Identity In East Asia* (pp. 203-225). London: Routledge Taylor & Francis Group.
- Goh, C. B. and S. Gopinathan. 2008. The Development of Education in Singapore since 1965. In S. K. Lee, C. B. Goh, B. Fredriksen and J. P. Tan (Eds.), *Toward a Better Future: Education and Training for Economic Development in Singapore*. Washington D.C.: National Institute of Education/The World Bank, 12–38.
- Goodman, R., G. White and H. Kwon. 1998. *The East Asian Welfare Model: Welfare Orientalism and The State*. London: Routledge.
- Hanushek, E. A. and L. Woessman. 2005. *Does Educational Tracking Affect Performance And Inequality? Differences In Differences Evidence Across Countries*. Munich: CESifo Group Munich. Retrieved from <http://hdl.handle.net/10419/18779>.



- Heckman, J. J. 2006. "Skill Formation and the Economics of Investing in Disadvantaged Children". *Science* 312(5782): 1900–2.
- Heng, S. K. 2012. Speech by Minister for Education Heng Swee Keat, 27 December.
<http://www.moe.gov.sg/media/speeches/2012/12/27/speech-by-mr-heng-swee-keat-at-36.php>.
- Hindriks, J., M. Verschelde, G. Rayp and K. Schoors. 2010. *Ability Tracking, Social Segregation and Educational Opportunity: Evidence from Belgium*. Belgium: Center for Operations Research and Econometrics.
- Ho, K. C. 2006. "Where do community iconic structures fit in a globalizing city?" *City*, 10(1): 91–100. doi:10.1080/13604810600594662.
- Homlund, H. 2008. *Intergenerational Mobility and Assortative Mating: Effects of an Educational Reform*. London: London School of Economics: Centre for the Economics of Education.
<http://cee.lse.ac.uk/ceedps/ceedp91.pdf>.
- Hong Kong Institute of Education (HKIE). 2013. "HKIED Study: Disparity in Higher Education Attainment is Widening Between Rich and Poor".
<https://www.ied.edu.hk/media/news.php?id=20130131>.
- Ichino, A., L. Karabarbounis and E. Moretti. 2010. *The Political Economy of Intergenerational Income Mobility*. Cambridge, MA: National Bureau of Economic Research.
- Kwon, H. K. 2007. *Transforming the Developmental Welfare States in East Asia*. New York: United Nations.
http://www.un.org/esa/desa/papers/2007/wp40_2007.pdf
- Lewis, O. 1966. "The Culture of Poverty". *Scientific American* 215(4): 19–25.
- Lian, K. F. and C. K. Tong (eds.). 2008. *Social Policy in Post-Industrial Singapore*. Leiden: Koninklijke Brill.
- Lien, L. 2013. "New Paradigms Needed for Social Innovation in Singapore". *MSF-CSC Social Sector Conference: New Insights On Social Services and Safety Nets*. Singapore: Ministry of Social and Family Development and Civil Service College.



- Lim, J. 2013. "Myth of the invisible hand in health care", *The Straits Times*, 14 June.
- Lim, L. 2012. "Elitism, Egalitarianism and Meritocracy: The PERI and SERI Reports". In J. Tan (ed.), *Education in Singapore*. Singapore: Pearson, 33–50.
- Low, D. 2013. *Good Meritocracy, Bad Meritocracy*. IPS Commons. <http://ipscommons.sg/index.php/categories/featured/104-good-meritocracy-bad-meritocracy>.
- Machin, S. 2007. "Education Expansion and Intergenerational Mobility in Britain". In L. Woessman and P. Peterson (eds.), *Schools and the Equal Opportunity Problem*. Cambridge, MA: MIT Press, 29–50.
- Maheady, L. and D. M. Sainato. 1985. "The Effects of Peer Tutoring upon the Social Status and Social Interaction Patterns of High and Low Status Elementary School Students". *Education and Treatment of Children*, 51–65.
- Meighan, R. and C. Harber. 2007. *A Sociology of Educating*. New York: Bloomsbury Academic.
- Ministry of Education. 2006. *Contact: The Teacher's Digest*, Issue 2. http://www3.moe.edu.sg/corporate/contactprint/pdf/contact_jul06.pdf.
- Ministry of Education, Singapore. 2010a. *More Pathways for Secondary School Students*. <http://www.moe.gov.sg/media/press/2010/09/more-pathways-secondary-schools.php>.
- Ministry of Education, Singapore. 2010b. *Nurturing our young for the future: Competencies for the 21st century*. Singapore: MOE.
- Ministry of Education, Singapore. 2010c. "International OECD Study Affirms The High Quality Of Singapore's Education System", press release, 7 December. <http://www.moe.gov.sg/media/press/2010/12/programme-for-international-student-assessment-2009.php>.
- Ministry of Education. 2013. "Crest Secondary School to Provide Customised Curriculum and Programmes with Industry", press release, 10 April. <http://www.moe.gov.sg/media/press/2012/04/crest-secondary-school-to-prov.php>.



- Ministry of Health, Singapore. 2010. *National Mental Health Blueprint Singapore* 2007-2012. <http://www.imh.com.sg/uploadedFiles/Publications/IMH%20National%20Mental%20Health%20Blueprint.pdf>.
- Ministry of Social and Family Development (MSF). 2009. *Early Childcare Development Agency publication*. http://www.childcarelink.gov.sg/ccls/attachments/Comcare_Snapshot_publication_1-4.pdf.
- National Council of Social Service. 2013. *About VWOs, Charities & IPCs*. Retrieved from National Council of Social Service: http://www.ncss.gov.sg/VWOcorner/about_vwo.asp.
- Ng, I. Y. 2013a. "Education and Intergenerational Mobility in Singapore". *Educational Review* (online). doi:10.1080/00131911.2013.780008.
- Ng, I. Y. 2013b. "Multi-Stressed Low-Earning Families in Contemporary Policy Context: Lessons from Work Support Recipients in Singapore". *Journal of Poverty* 17(1): 86–109.
- Ng, I. Y. 2013c. "The Political Economy of Intergenerational Mobility in Singapore". *International Journal of Social Welfare* 22(2): 207–18. doi:10.1111/j.1468-2397.2012.00887.x.
- Ng, I. Y. (forthcoming). "The Political Economy of Intergenerational Mobility: Implications for Singapore's Skills Strategy". In J. Sung (ed.), *Skills Strategies for an Inclusive Society: the Roles of the State, the Enterprise and the Worker*. Singapore: Institute for Adult Learning.
- Ng, I. Y. and H. Sim. 2012. "Funding and Remuneration in Social Services: Lessons from Singapore". *Administration in Social Work* 36: 280–301. doi:10.1080/03643107.2011.592055.
- OECD. 2010. *PISA 2009 Results: Overcoming Social Background — Equity in Learning Opportunities and Outcomes (Volume II)*. doi:10.1787/9789264091504-en.
- OECD. 2012. *Social spending after the crisis*. <http://www.oecd.org/els/soc/OECD2012SocialSpendingDuringTheCrisis8pages.pdf>.
- Pekkarinen, T., R. Uusitalo and S. Kerr. 2009. "School Tracking and Intergenerational Mobility: Evidence from the Finnish Comprehensive



- School Reform". *Journal of Public Economics* 93(7–8): 965–73. doi:10.1016/j.jpubeo.2009.04.006.
- People's Association. (2013). *Community Development Councils*. <http://www.pa.gov.sg/community-development-councils.html>
- Phua, K. H. 2011. "Ensuring healthcare is affordable for all", *The Straits Times*, 18 August.
- Raffe, D. 2003. Pathways Linking Education and Work: A Review of Concepts, Research, and Policy Debates". *Journal of Youth Studies* 6(1): 3–19. doi:10.1080/1367626032000068136.
- Rather, D. 2012. *Dan Rather Reports: Finnish First*. Denver: AXS TV.
- Reardon, S. 2013. "No rich child left behind". New York Times, 27 April. http://opinionator.blogs.nytimes.com/2013/04/27/no-rich-child-left-behind/?smid=fb-nytimes&WT.z_sma=OP_NRC_20130429.
- Sahlberg, P. 2011. *Finnish Lessons: What can the World Learn from Educational Change in Finland?* New York: Teachers College Press.
- Singapore Department of Statistics website. "Statistics: Latest Data". http://www.singstat.gov.sg/statistics/latest_data.html#16.
- Singapore Medical Council. 2010. Singapore Medical Council Annual Report 2010. [http://www.healthprofessionals.gov.sg/content/dam/hprof/smc/docs/annual_reports/SMC%20Annual%20Report%202010%20\(Final\).pdf](http://www.healthprofessionals.gov.sg/content/dam/hprof/smc/docs/annual_reports/SMC%20Annual%20Report%202010%20(Final).pdf).
- Sng, Q. S. 2011. *Primary Care Survey 2010: Profile of Primary Care Patients*. Singapore: Ministry of Health. http://www.moh.gov.sg/content/moh_web/home/Publications/information_papers/2011/primary_care_survey2010profileofprimarycarepatients.html.
- Tan, J. 2010. "Education in Singapore: Sorting them out?" In *Management of Success: Singapore Revisited*. Singapore: Institute of Southeast Asian Studies, 288–309.
- Tan, J. and S. Gopinathan. 2000. Education Reform in Singapore: Towards Greater Creativity and Innovation? *National Institute for Research Advancement (NIRA) Review* 7(3): 5–10.



Turner, R. H. 1960. "Sponsored and Contest Mobility and the School System". *American Sociological Review* 25(6): 855–67.

United Nations Development Programme. (2009). *Human Development Report 2009*. Human Development Report: http://hdr.undp.org/en/media/HDR_2009_EN_Complete.pdf

Yeung, J. 2012. "Implications of the College Expansion Policy for China's Social Stratification". *SMU Social Sciences and Humanities Seminar Series*. Singapore: Singapore Management University.

Yip, C. S. 2012. *Intergenerational Income Mobility in Singapore*. Singapore: Ministry of Finance. <http://app.mof.gov.sg/data/cmsresource/Feature%20Articles/IG%20Income%20Mobility%20In%20Spore.pdf>.





Chapter 7

Social Capital and Development



CHAPTER 7: SOCIAL CAPITAL AND DEVELOPMENT

7.1 TERMS OF REFERENCE

This chapter examines social capital and its development within the context of Singapore's demographic changes and population challenges, and proposes policy recommendations to address issues in areas related to family; intergenerational relations; social identities; social divides; social cohesion and national identity; and national service and service to the nation. The study group begins by examining the core concept of social capital, along with its applications and relevance for the Singapore population scenarios and contexts. We then discuss key issues pertaining to social capital before providing a list of recommendations for the development of social capital in Singapore.

7.2 BACKGROUND

Social Capital: Concept and Relevance to Singapore

Drawing on the works by various scholars (see Coleman 1988; Putnam 1993 and 1995; and Stone 2003), the group uses the term social capital to refer to the actual or potential socio-psychological resources that facilitate individual or collective action to co-ordinate or co-operate in order to resolve problems and achieve goals for mutual benefit. The concept of social capital focuses on the resources available to help individuals do more than they can otherwise do on their own to achieve goals and accomplish positive outcomes. These resources are derived from the structure of social relations and the nature of social interactions between individuals. As such, social capital is rooted in social networks, relationships, trust and norms (especially reciprocity norms) shared among the individuals involved.

Like traditional economic capital, social capital can be drawn upon as a resource to provide the means to achieve goals and, all other things being equal, individuals and communities with higher social capital are more likely to have higher efficacy in achieving the intended goals. However, there are two important differences that distinguish social capital from economic capital. First, while economic capital is tangible and ultimately uni-dimensional in that it is reducible to monetary terms, social capital is intangible and multi-dimensional in nature with multiple bases of resource and influence. Second, while economic capital depletes when it is spent and remains stable or grows when kept in reserve, social capital exhibits the opposite behaviour — it grows when used and depletes when unused because networks, trust and norms are reinforced when translated into action, but decay over time when not acted upon.



Scholars have distinguished two types of social capital: *bonding* and *bridging* social capital. Each comes about as a result of different network structures and serves different functions within a given community.

Bonding social capital involves trust and reciprocity norms in closed networks where individuals have mutual links to each other based on a distinct commonality. Such closed networks generally come about due to specific demographic characteristics such as race or religion but may also exist within groups that are brought together through a common cause or interest such as civil society or sports groups. While bonding social capital develops social cohesion among individuals within the group, high levels of bonding social capital can be exclusionary; it can also lead to negative consequences when employed excessively and in the absence of any bridging between groups due to strong within-group norms and social controls. Examples of these negative consequences include group-think and the stifling of personal freedoms.

Bridging social capital, on the other hand, involves cross-cutting ties across groups. This is centred on loose connections between individuals in a more open social circle, which allows the sharing of fresh information, non-redundant resources and new ideas. Bridging often occurs when members of one group interact with members of other groups to seek support or information. Bridging social capital could contribute to increased understanding between groups and facilitate inter-group relations. Bonding social capital is necessary for bridging social capital, and both types of social capital are important for intra- and inter-group relations when developing social capital in a community.

It is useful to view social capital as both a state and a process. As a state, it describes the social-psychological resources at a particular point in time and the corresponding structure of social relations and the nature of social interactions between individuals. However, social relations are not static; they may evolve and change as they become influenced by various factors. As a process, the focus is on the development of social capital in which the interest is in the dynamics and relationships that lead to a particular state or various states of social capital at different points in time. Recent advances in longitudinal modelling allow us to track and examine a series of states of social capital, along other predictor and outcome variables, to understand how social capital changes over time in various ways (Chan 2002).

Social capital is important because it predicts important outcomes such as collective action, problem-solving and social resilience to threats and crises. Social capital is critical to Singapore, given that we are a young and small country with a heterogeneous society made up of different races and



religions. The development of social capital has become particularly relevant to Singapore as we are now confronted with various population scenarios associated with multiple demographic changes related to increases in population size and diversity. These changes are complex and inter-related and much of their impact, both social and economic, are likely to depend on the development of social capital. Adequate social capital will help prevent negative societal consequences and promote positive ones. Thus, both prevention and promotion goals guided our discussion of issues as well as our recommendations.

This chapter summarises the key issues and recommendations, with the aim of facilitating further public discussion and providing inputs for policymakers to make informed decisions on population policies for different population groups and profiles.

7.3 ANALYSIS

Issues Relating to Development of Social Capital in Singapore

In this section, we discuss issues of social capital in areas related to family, intergenerational relations, social identities, social divides, social cohesion and national identity, and conscription (i.e., National Service) and overall service to the nation. The discussion provides the basis for the recommendations outlined in the next section.

Family

Families are important building blocks for social capital development as they are primary vehicles for fostering attachments and rootedness. Strong families can engender rootedness and affective commitment to Singapore by creating strong social and emotional attachments as well as a sense of belonging.

Public policy and public discourse regarding the family in Singapore have largely been centred on the concept of a nuclear family consisting of two generations, with both parents present or an extended family comprising three generations living under one roof. In order to understand the relationship between families and social capital in the context of Singapore's population challenges, it is necessary to go beyond this narrow conception of family (i.e., nuclear or extended family) and to take into account several trends that are likely to persist into the future. These include rising singlehood, low total fertility rate (TFR), ageing and longer life expectancy, and increased immigration and influx of foreigners. Specifically, these trends are likely to lead to a diversity of family forms that are qualitatively different



from the traditional concept of a nuclear or extended family, some of which are either already evident today or likely to become pervasive in the near future. Examples include double-income married couples with no children (commonly referred to as “DINK”), double-income married couples with children brought up by foreign domestic workers, single-parent families, multi-generational households comprising more than three generations, and transnational marriages. These heterogeneous family forms, which are currently not explicitly accounted for in policymaking, will need to be examined in detail and taken into consideration in the efforts on family development and relating family to social capital.

The combined trends of rising singlehood, declining TFR and increasing lifespan in Singapore imply that there will be an increase in the proportion of elderly living alone. Hence, it is critical to correctly identify and adequately address the relevant and emerging issues of health and community care. For example, elderly who are living alone do not have the type of financial, physical and social support that a family can provide for their healthcare needs. This has implications for early health promotion, the relevance of various initiatives to enhance active ageing, and infrastructure planning including the type and accessibility of facilities.

Finally, rising singlehood itself is a trend with social capital ramifications for Singapore. As more Singaporeans remain unmarried, either by choice or constraint of circumstances, they will form an increasingly large and significant segment of the population. Public policies, especially those formulated with the intent to promote family formation and procreation, will need to recognise the needs of Singaporean singles and their contributions and rights (both actual and perceived) as citizens. This is particularly relevant in the area of housing policies, given that current policies explicitly provide family support, e.g., providing financial incentives for family support. Failing to do so will lead to a sense of alienation and perception of unfairness and discrimination among Singaporean singles who constitute a large and significant segment of the population that can contribute either positively or negatively to social capital development in Singapore.

Intergenerational relations

In the 2013 Population White Paper (NPTD 2013) and related official statements on Singapore’s ageing population, a central focus was on the adverse consequences that would result from increasing old-age dependency ratios for Singaporeans if there are no mitigation effects from procreation and immigration. The old-age dependency ratio is defined as the number of persons 65 years and over per one hundred persons aged 15 to 64 years. The conceptualisation is based on the assumption that it is appropriate to bifurcate Singaporeans into two groups with those below the



age of 65 having to economically support those above it. The validity of this assumption is questionable on both economic and social grounds. It incorrectly assumes that upon reaching 65 years of age, Singaporeans are no longer able to contribute to society at large and will suddenly and automatically become a burden and dependent on those who are younger.

The age of 65 years is one of many arbitrary cut-offs that could be selected to indicate economic contribution and dependency. The official retirement age is a function of national and organisational employment policies, which can be changed (see also Chapter 2 on Capital). In addition, actual permanent retirement from any employment and economically productive activity is partly dependent on the individual's choice and circumstances, some of which may be influenced by the prevailing social norms and policies. In reality, many Singaporeans aged 65 and above are economically active and contribute either directly or indirectly, as well as significantly, to the vibrancy of Singapore's economy, while many aged 25 years or younger¹ are still in the schooling phase of life, and not in a position to provide financial support to family members.

Moving forward in the population projections, older Singaporeans will become more highly educated and have longer life expectancy. Together with advances in technology and medical science, adoption of healthy lifestyles and redesign of work, it is highly likely that post-65 year olds will be in sufficiently good health for a longer period of time, thereby allowing older Singaporeans to make productive and significant contributions, both economically and socially.

Older Singaporeans should have opportunities to stay well integrated into both the workplace, at their own pace and in their chosen area of work, and the society, in various voluntary endeavours. Each generation of older Singaporeans will possess not only economic capital but also important social knowledge and skills related to history, culture and practical experiences that can be transferred to younger generations. These resources are valuable assets to society and contribute positively to social capital. When older Singaporeans are cast in more positive light or have built strong family ties, intergenerational relations are enhanced and positive intergenerational transfers are more likely to occur, which in turn contribute to the development of social capital.

In short, population policy formulation and public discussion need to move away from a fixation on reducing the old-age dependency ratio and the

1. These are known as "young dependents" (although traditionally either 15 or 20 years rather than 25 will be used as the cut-off age).



conjecture that a high ratio will produce adverse consequences, while rethinking the current assumptions upon which the old-age dependency ratio is based. The current focus on the old-age dependency ratio and its conceptualisation perpetuates a counterproductive stereotype that ageing is inherently negative and incorrectly casts older Singaporeans in a negative light. This is counterproductive to addressing population challenges and likely to harm intergenerational relations and negatively affect social capital.

In contrast to the negative framing of the concept of old-age dependency ratio and the underlying notion that constructs ageing as a liability, our view of older Singaporeans as an asset and valuable resource will lead to a different orientation towards social expenditure on the elderly. The latter should not be construed as a zero-sum cost or as the depletion of resources. This erroneous construal will lead to misallocation of resources and funds. Instead, it should be construed as a continuous investment in human resources, with efforts in enhancing health, work, community development and other elderly-focused initiatives regarded as strategic, goal-directed investment to enhance citizen well-being and developing intergenerational relations. This investment will have a positive multiplier effect that broadens and builds social capital.

Social identities

Social identity is the part of an individual's self-concept, derived from perceived membership in a social group (Tajfel and Turner 1986). People possess multiple social identities corresponding to their social group memberships (e.g., nationality, ethnicity, religion), and these identities may vary in strength. Different identities can be activated in different situations. Individuals from different groups may differ in the weights and priority to which they assign to their different social identities. Because social identities influence the way an individual thinks, feels and acts, they are powerful sites for the development of social capital. Social identities can be potentially unifying or divisive forces through their direct impact on cognition and emotion, which in turn influence individual and intergroup behaviours.

As the demographic profile of the population changes, issues related to ethnic and religious group identities will increase in importance and complexity. The current CMIO model in which Singaporeans are classified into four ethnic categories (i.e., Chinese, Malay, Indians, Others) does not adequately reflect the complex realities of how people perceive themselves and one another, especially with regard to local-foreigner perceptions. For example, based on the CMIO model, PRC Chinese foreigners and new Singapore citizens who were PRC Chinese nationals are classified in the same Chinese ethnic category as Chinese Singaporeans who have grown up in Singapore or lived here for many years. While belonging to the same



ethnic category according to CMIO classification, Chinese Singaporeans are clearly distinguishable from PRC Chinese foreigners and naturalised citizens in terms of some cultural beliefs, values, attitudes, norms, habits and perceptions. Moreover, PRC Chinese themselves are not a homogeneous group given the immense cultural diversity across different regions of origin in China. Such “within-PRC Chinese” differences create new layers of complexity.

The cultural differences among the various groups within the same ethnic classification are likely to result in important group differences in how they behave and react to the same situation. When not adequately managed, these practical group differences could lead to violations of expectations, misunderstanding and conflicts, which in turn threaten bridging social capital. Using the same ethnic category (e.g., Chinese) as a basis for policies (e.g., ethnic-based self-help groups) and predictions of behaviour is unlikely to achieve the desired goal and likely to lead to negative unintended consequences. This is because important actual group differences are masked when individuals from these different groups are classified together into the same ethnic category.

Challenges similar to the issues on ethnicity also apply to the classification of individuals into religious groups. Religious customs and practices differ between distinct communities, and this could occur even within the same religion (Kong 2010). These differences can sometimes alienate people or lead to conflicts between people who possess differing beliefs or between locals and foreigners who are unfamiliar with the religious landscape in Singapore. As with the CMIO model, the current classification of the major religions in Singapore does not capture the complexities and heterogeneity within the same religion. Failing to adequately manage differences that are rooted in religious group identities will threaten bridging social capital.

The Singapore government has been successful in engaging leaders of the major religions in Singapore to address multi-religious issues including inter-religious group conflicts. However, the inflow of foreigners, which changes the profile of the population, will increase religious diversity in Singapore due to introduction of new religions and splintering within a traditional major religion or religious community. Thus, the government may face new challenges in attempting to identify the actual and emergent leaders who exert influence over the believers. As the nominal membership of a religious group—classified according to the major religions in Singapore—increases due to the inflow of foreigners, the actual diversity of the communities within the same official religion category could increase in complex ways and lead to increasing fragmentation in the traditional religious communities. For example, divergences within the same official religion category may occur



along class, ethnic or nationality lines. The increased diversity could also lead to the lack of a unified religious authority for a major religion.

Given that religious beliefs address fundamental issues of values and morality, which could influence basic cognitions, emotions and behaviours, religion provides a social identity that has potentially powerful effects on individuals and groups. The strength of a religious group identity may be further enhanced for religious groups with increased social interactions in terms of frequency, duration and intensity. A strong religious group identity will readily translate into collective perception and action that are often persistent and resilient. It increases bonding social capital among the believers and could lead to positive or negative consequences depending on the alignment of interests between religious groups and between the religion group and the larger society. For example, religion could play a significant role in helping newcomers to adjust to Singapore, which can facilitate the development of bridging social capital between locals and newcomer groups.

Religion could also motivate a religious community into societal contributions through social services. However, religious harmony remains the paramount concern for Singapore. Care must be taken to ensure that religious harmony is preserved despite the increasing diversity associated with population changes due to the rapid inflow of foreigners.

Social divides

Part of our population challenges involves different forms of social divides that add to the complexity of social stratification in Singapore (Tan 2004). These social divides have not been given explicit or sufficient attention in the Population White Paper and in public discussions on population issues. These social divides separate people into distinct social groups in a way that reduces bridging social capital. Some of these social divides are created or accentuated by the large and rapid inflow of foreigners. When not adequately addressed, they will hinder the positive development of social capital. Such divides include social inequalities (both actual and perceived) such as large and increasing disparities in opportunities and outcomes relating to wages, income and wealth, education, occupation, housing and land use. The divides also include social disparities in lifestyle and social norms.

Social divides manifest themselves as societal issues that call out for urgent attention. Examples include the decline in social mobility, mismatch between citizen aspirations and job opportunities, possible unemployment or under-placement of Singaporean graduates, differences in values and attitudes relating to meritocracy and definitions of success, fairness at work, and



social equality and equity in land use. These societal issues, which take the form of citizen concerns and aspirations, are fundamental because they relate to societal goals and the kind of society that Singaporeans want. Thus, we need to give priority to adequately address these citizen concerns and aspirations as a means of making progress towards achieving desirable societal end goals. Social tension is likely to emerge if these social issues are framed as unfortunate or inevitable consequences of difficult but necessary decisions in policy trade-off situations to achieve a vibrant economy.

Social cohesion and national identity

The 2013 Population White Paper states that the first of three pillars for a sustainable population and dynamic Singapore is to build a strong “Singaporean core” (the other two pillars are creating good jobs and opportunities for Singaporeans and creating a high quality living environment). It also states that a strong Singaporean core is needed for a cohesive society. The definition of a Singaporean core and what is meant by its strength are not explicitly stated in the White Paper. However, judging by various references made to maintaining a specific citizen proportion and sustaining it as the Singaporean core of the total population, augmented by non-citizens, we may infer that the Singaporean core is operationally defined in the White Paper as Singapore citizens.

When used in the context of strengthening social cohesion and national identity, the concept of “Singaporean core” needs to be related to both bonding social capital within the core and bridging social capital between those in the core and those outside it. In this regard, when defining or identifying the core, it is important to distinguish between legal and socio-psychological markers of being Singaporean.

From a technical perspective, Singaporean core may be equated with the proportion of the total population who are Singapore citizens. This perspective operationalises the concept of Singaporean core in terms of a purely legal definition. Membership in or outside the core is dichotomous and mutually exclusive, and it is determined by the rule of law and objectively verifiable (e.g., possession of a Singaporean identity card). However, this legal definition is distinct from the social-psychological markers that an individual uses, whether consciously or not, perceiving who is a “true” or “real” Singaporean and considering what is meant by being a Singaporean.

From the perspective of Singaporeans who have grown up in Singapore and lived here for many years, these markers are likely to include alignment with certain core values (e.g., racial and religious harmony, meritocracy, rule of law) and adherence to certain behavioural norms, e.g., not jumping queues,



volume of speech and gestures used in conversation, not eating in public transit, etc., that have taken root among Singaporeans in the past few decades. When new Singapore citizens are perceived to regularly exhibit behaviours that indicate value incongruence or norm violation, they are deemed as being “un-Singaporean” and less likely to be accepted as “true” or “real” Singaporeans. Social integration may then become more difficult, negatively affecting social cohesion among Singaporeans. When foreigners in Singapore are perceived to regularly violate values and norms that matter to Singaporeans, it creates an “us versus them” mindset that will reinforce local-foreign divides. This in turn negatively affects bridging social capital, thereby threatening social cohesion in Singapore.

There are also social capital implications of foreigner groups dominating in major sectors such as the healthcare, finance and service industries. Over-reliance on foreigners, especially on specific nationality groups, will threaten social cohesion through weakening our economic security and social resilience. In the event that a critical mass of foreigners choose to leave Singapore or engage in disruptive value-incongruent or norm-violating behaviours, e.g., labour strikes, unfair employment practices, etc., it will have direct and immediate effects on economic functioning. It will also create intergroup tensions and erode trust, producing lasting adverse effects on bridging social capital between Singaporeans and foreigners. These effects will translate into decreased commitment to Singapore and weakened rootedness to the country.

Singapore’s infrastructure and local population were not prepared for the rapid and large influx of foreigners that occurred in the past few years. The large numbers of foreigners and rapid influx create threats to social cohesion from crowding, clustering, competition, comparisons and conflicts (Chan 2012a) and increase the risks and uncertainties that accompany population challenges (Yeoh and Lin 2012). Understanding these challenges will help focus attention on the real concerns of Singaporeans about integrating foreigners and provide a framework for efforts towards integration and policy formulation and implementation. For example, the framework by Chan (2012b) proposes that population policies need to pay attention to the policy purpose, priorities and perceptions and explicates the various ways we can enhance integration by adopting more citizen-centric approaches to public policy, developing opportunities for contributions by locals and foreigners, investing in community development, being more sensitive in our communications and effectively managing conflicts and crises.

National Service and service to the nation

There are two population challenges regarding National Service (NS) that need to be addressed urgently and adequately. The first concerns citizen



perceptions of new citizens and foreigners who do not serve NS and the other concerns citizen commitment to NS.

NS is widely considered by Singaporeans as a national duty of male citizens that involves significant sacrifice. Comparison with foreigners who do not serve NS may involve cost-benefit analyses of the relative contributions that Singaporeans and foreigners have made to Singapore and the relative benefits they have gained from the economic pie and public policies. The comparison is however much more than an economic calculation. It involves principles of fairness, social reciprocity, sense of belonging, divergence of interests and beliefs in the rights, responsibilities, privileges and entitlements of citizens and non-citizens. The concerns arising from the comparison of NS are rooted in non-economic values and principles, and cannot be adequately addressed by economic or monetary answers alone (Chan 2012a). Having served NS is also highly ranked by Singaporeans as a social-psychological marker of being Singaporean when they perceive new male citizens (Leong 2012). Perceptions of unfairness and social tensions happen when they see that there are many new citizens who do not need to serve NS. These perceptions and tensions, which arise from the erosion of the universality principle of NS, threaten bridging social capital between Singaporeans who serve NS and new male citizens who do not, and also eventually bonding social capital among Singapore citizens.

The first challenge stemming from comparison of NS liability leads to the second challenge of maintaining citizen commitment to NS. As the number and proportion of foreigners and new citizens who do not serve NS in the population increases, the comparison on NS will threaten the social-psychological concept of the Singaporean core and the number in this core will decrease relative to the legal definition of Singapore citizens. This declining Singaporean core may question the meaningfulness and worthiness of doing NS and defending a country that is inhabited by a large proportion of foreigners and new male citizens who do not perform NS. The adverse outcomes are directly indicative of a significant weakening of national and social resilience, stemming from the erosion of NS as an institution and declining citizen commitment to the defence of Singapore and citizen rootedness in the country.

The primary purpose of NS is national defence, but NS has important social by-products that are directly relevant to social capital. The mandatory, universality and interactional aspects of NS make it a powerful institution and environment for socialisation with a diverse range of people, as well as the integration and rootedness of those who serve NS and their families and significant others who are affected. Given the significant role of NS as a site of social capital development and the above two population challenges



related to NS, Singapore needs to better explicate, tighten and enforce NS obligations, particularly as a consideration for citizenship. In addition, given that NS provides a powerful experience for developing social capital and national socialisation, it begs the question of why certain groups such as females and foreigners are left out of the process.

7.4 RECOMMENDATIONS

Based on the major issues discussed in the preceding section, we next examine the implications of specific population challenges and derive the following five sets of recommendations for social capital and its development.

Family and Intergenerational Relations

Enhance integration of policies and co-ordination of initiatives between MSF and MCCY

With effect from 1 November 2012, the Ministry of Community Development, Youth and Sports (MCYS) was restructured into the Ministry of Social and Family Development (MSF) to bring a sharper focus on the government's work in the development of families and social services (PMO 2012). The previous roles of MCYS on strengthening community bonds, volunteerism and philanthropy as well as engaging youth and developing sports, were taken over by a newly formed ministry (Ministry of Culture, Community and Youth, or MCCY). Several agencies under the purview of the former MCYS were also taken over by MCCY. MCCY is now seen as the lead ministry to co-ordinate the government's efforts to build social capital and strengthen community bonds (Ng 2013). However, the family is an important site of social capital, with major implications from issues of different family forms and intergenerational relations. Hence, there is a need to ensure that a "whole-of-government" approach to social capital development will go beyond the technical co-ordination across agencies to enhance policy integration. We propose that MSF and MCCY institutionalise regular inter-ministerial forums at both the senior management and staff operational levels to ensure that policies and initiatives are well integrated in the areas of family and social capital. There is also a need to co-ordinate with the Ministry of Health on issues of active ageing and intergenerational relations.

Conduct studies on transnational marriages

Recent data showed that about 40% of all citizen marriages in Singapore in 2012 involved a foreign spouse (NPTD 2013, 19). While marriage is a personal choice, the conditions under which some of these transnational marriages are formed may not be conducive to forming stable and quality families. An example is the case of Singaporean males entering into marriages through commercial matchmaking with women from foreign



countries in which there are little or no interaction between the couple prior to marriage. These marriages may tend to be less stable and they create citizenship, child custody, child development and family functioning issues when they result in separation or divorce. To prevent and mitigate the social problems that accompany severe marital conflicts and dysfunctional families, more empirical studies on transnational marriages are needed to develop evidence-based approaches to facilitate these marriages to become sites of positive rather than negative social capital (Yeoh et al. 2013).

Review policies on rights and privileges for singles and non-traditional family forms

To address the problem of the low TFR, government policies have been formulated to explicitly signal and recognise the importance of marriage and parenthood. This is done through administering Marriage and Parenthood packages that directly benefits and gives priority to marriage and childbirth in areas such as housing, paid leave and financial support for childcare. That is, maximum Marriage and Parenthood benefits are given to Singaporeans with the traditional family form consisting of a married couple with children. However, some of these Marriage and Parenthood initiatives may have direct or indirect effects that result in important disadvantages to citizens simply because of their status as a single or unwed parent. Given that marriage and child-bearing are personal choices and both singlehood and failure to bear children may also be a result of circumstances beyond one's control, Singaporeans who are single or in non-traditional family forms may feel alienated or unfairly discriminated by the Marriage and Parenthood policies. These perceptions may reduce their stakes in Singapore and weaken their commitment and rootedness to the country. The tension is likely to increase as Marriage and Parenthood policies expand to cover more areas in diverse life domains (e.g., housing, work leave, financial incentives), especially in areas involving citizen rights and entitlements that are thought not to depend on marital or parenthood status. With the likely increases in the number of singles, delayed marriages, childless couples, delayed parenthood and various non-traditional family forms, we propose a comprehensive review of policies to address the needs of these diverse groups of Singaporeans who should be part of the Singaporean core and could contribute significantly to social capital.

Develop mixed-use infrastructure and facilities to promote family and intergenerational relations

Facilities that are built to cater to the needs of the elderly and increase their well-being, such as senior activity and wellness centres, should be located within residential areas. However, wherever practically feasible, these facilities should be developed as part of a mixed-use infrastructure and facilities cluster as opposed to exclusively for elderly care (this



recommendation corresponds with similar points raised by the Land and Social Infrastructure Development study groups). This will help prevent stigmatisation and isolation of the elderly and conflicts over land use in residential areas. The mixed-use and facility cluster should serve a complementary range of activities and services (e.g., childcare, senior activities, libraries, social enterprises, etc.) and enable accessibility to and foster interactions of different generations. These facilities could also be tailored to the specific needs of communities based on grassroots feedback so as to create a sense of community ownership and belonging.

Target health screening and promotion early

Research has shown that individuals with poor health are more likely to have poor social relations and low social well-being. Many activities for developing social interactions and relationships (especially those involving older persons) presuppose a basic level of health among the individuals involved. Good, healthy functioning is a fundamental pillar for developing social capital. Although the life expectancy of Singaporeans has increased, this index of human development does not measure health conditions such as long-term chronic illness or ailments that Singaporeans may face as they grow older. We propose that the government work with the private and people sectors to institute a comprehensive and targeted national health screening programme over the individual's lifespan beginning from a young age. The early screenings will enable the early detection of health risks and more effective prevention and management of health problems for an ageing population.



Create alternative care arrangements for the elderly

With increasing singlehood, declining fertility and increasing life expectancy, there will be more elderly Singaporeans who are living alone. Many of them may not have family members or caregivers to provide the physical and social support that will facilitate active ageing or even the basic support necessary for a reasonable level of healthy functioning and well-being. We propose that the government study alternative care arrangements for the elderly and introduce new arrangements to complement existing ones. While some of these alternative arrangements can be quite readily introduced as they are practical, feasible and conform to social norms, others may involve bold and innovative solutions. For example, the government may consider authorising the formation of a quasi-family unit where elderly Singaporeans are allowed to live together in the same housing unit and care for each other with legally binding rights and responsibilities.

Social Identification

Systematically engage non-PR foreigners on issues of harmonious relations across different nationalities, races and religions

As stated in the Population White Paper, non-PR foreigners living in Singapore currently form a significant part of the total population (1.49 million in 2012, or 28% of the total population), and it is projected to increase in size and proportion, estimated at 1.8 to 1.9 million or about 31% in 2020 and then 2.3 to 2.5 million or about 36% in 2030. In population discussions, the government uses the term “transient non-resident population” to refer to this group of non-PR foreigners. However, the adjective “transient” is a misnomer in terms of their role in the development of social capital in Singapore. The numbers imply that for every 10 persons living in Singapore, three or four are non-PR foreigners. This large group of non-PR foreigners includes various types of work pass holders in diverse jobs (e.g., professionals, managers, executives, technicians, construction workers, foreign domestic workers, etc.), students and dependents of citizens and PRs, and work pass holders. They interact with Singaporeans on a daily basis as they live, work and play in Singapore. They constitute a heterogeneous composite of foreigners of different nationalities, ethnicities and religions with diverse values and cultural backgrounds, and their presence adds to the diversity of core beliefs and attitudes held by individuals living in Singapore.

Given the fact that social identities based on nationality, race and religion are strongly evocative of one’s thoughts, feelings and behaviours including collective action, it is important to create opportunities and programmes for non-PR foreigners to learn more about local norms and values relating to national pride, race relations, and religious sensitivities, and how they may



adapt to these norms and be sensitive to these values. Compared to most new citizens and PRs who have taken a significant step to commit to Singapore, aim to fit into the society and have higher stakes in the country, most non-PR foreigners are likely to view Singapore as a transit point for work or study. It is unrealistic to expect that all or most of the non-PR foreigners will naturally or make significant and sustained efforts to fit well into local norms and values. Hence, we propose that the government work with the various stakeholders (e.g., employers, religious groups and ethnic-based self-help groups) to systematically engage non-PR foreigners to increase their sensitivity to local norms and values, with particular focus on promoting harmonious relations across different nationalities, races and religious groups in Singapore. This systematic engagement is necessary to prevent and mitigate the adverse effects on social resilience that result from inter-group conflicts. When done effectively, it also increases the pool of non-PR foreigners with high integration potential to become suitable PRs and eventually integrated new citizens who contribute to the Singaporean core.

Conduct citizen-led mandatory and voluntary programmes to help suitable foreigners better understand Singapore before they become PRs and new citizens

To enhance local-foreigner integration, efforts should be made to promote foreigners' understanding of Singapore in terms of important laws, values, norms and cultures. Although an important part of this understanding may come naturally over time from daily experiences in Singapore, these naturalistic experiences may be limited for foreigners with few opportunities for interaction given the circumstances of their workplace and social networks. Moreover, there are many local norms, values, cultures and laws that are best learned by the foreigner from a combination of structured programmes and daily experiences. We propose that a wide spectrum of Singapore citizens be engaged to conduct both mandatory and voluntary programmes on different critical aspects of Singapore, focusing on laws, norms, values and the practices and beliefs associated with the major ethnic and religious groups in Singapore. Having a wide spectrum of Singaporeans to lead these programmes will also provide Singaporeans an avenue for positive interactions with diverse foreigners, thereby enhancing local-foreigner integration and bonding social capital. It is important that these integration programmes be conducted early and well before foreigners are granted PR status or citizenship. This will reduce the problems of integration tensions experienced or caused by new PRs and new citizens.

Review regulatory safeguards and barriers to entry for social and community services provided by racial or religious groups



Consistent with Singapore being a secular state with individual freedom of religion, the government makes a clear separation between the teachings of religious organisations and the secular social services that these organisations provide to those who are in need. Currently, government funding and land are not given to religious organisations that do not follow the rules of secularism in the delivery of their social services. However, given the strength of positive influence that religions could have on their believers' social identities and hence their beliefs, emotions, attitudes, motivations and behaviours, delivery of social services by religious groups should be encouraged rather than prevented in some situations. For example, religious groups may be well suited or more suited than secular groups to deliver some social services to their believers. When managed well, delivery of services by religious groups could enhance social capital in more effective ways than secular groups. We propose that the government review the regulatory safeguards and barriers to entry relating to delivery of social services by religions organisations, taking into consideration both the goal to prevent negative outcomes and the goal to promote positive outcomes.

Social Divides

Involve social enterprises and non-profit organisations in businesses, job creation and skill development for Singaporeans

Currently, almost all major initiatives directed at creating jobs and developing work-relevant skills for Singaporeans as well as facilitating small and medium enterprises (SMEs) for Singaporeans, are led and dominated by the government and the labour movement through their respective agencies. The study group proposes that the government partner or involve social enterprises and relevant non-profit organisations (e.g., voluntary welfare organisations and civil societies) in these economic development efforts for Singaporeans. This involvement will highlight and build on the important reciprocal causal linkages connecting Singaporeans' economic and social concerns. It also provides opportunities for the development of a more efficacious and vibrant people sector as well as synergistic relationships between civil society and government, both of which will enhance social capital (Koh and Soon 2012).

Prioritise the creation of value-added jobs for Singaporeans and development of Singaporean core at worker and leadership levels

Having sufficient value-added jobs for Singaporeans that provide good person-job fit is important for economic productivity; it also contributes to social capital by reducing negative outcomes from citizen unemployment and underemployment as well as citizen perceptions of disparity and inequity from upward comparison with foreigners. As mentioned in the previous section, the development of a Singaporean core at both the worker and



leadership levels across the major sectors to avoid an over-reliance on foreigners is critical for security, economic and social resilience. Hence, we propose that the government give top priority to the two goals of creating value-added jobs for Singaporeans and developing a Singaporean core at both worker and leadership levels. It could start with including these two goals as major key performance indicators for economic development agencies. This is to prevent an over-emphasis on delivering initiatives or project outcomes that have high economic value but may not directly translate to benefits for citizens; or may even create the need for a critical mass of workers or leaders that can only be filled by foreigners with little probability of effectively training and grooming Singaporeans to take over these jobs.

Developing a strong Singaporean core in certain professions requires a concerted effort to improve career development, salaries and working conditions. In particular, community-based work (e.g., allied health professionals, paramedics and caregivers) that contributes directly to social capital faces a shortfall in part because the pay may have been depressed to a level acceptable only to foreigners and many Singaporeans see the conditions of the profession as undesirable. The study group proposes that the government conduct comprehensive reviews and invest more to improve the work conditions and career prospects of community-based professions, so as to attract more Singaporeans to take on these jobs. A similar recommendation is made by the Social Infrastructure Development study group (Chapter 6).

Extend the role of the Tripartite Alliance for Fair Employment Practices (TAFEP)

A local-foreigner divide occurs when Singaporeans experience feelings of neglect and react negatively when they perceive, rightly or wrongly, that they are unfairly disadvantaged at work in favour of foreigners. One example is the belief that foreign employers are hiring or promoting foreigners based on similarity or affiliations rather than merit. Recently, the Tripartite Alliance for Fair Employment Practices (TAFEP) has stepped up its efforts to promote fairness at work through public education, engagement with employers and dispute resolution. We propose that TAFEP be given more resources and authority, including legal powers if needed, to extend its role of promoting fairness at work. TAFEP's toolbox should include the full range of functions of education, engagement, arbitration, regulation, accreditation, enforcement and deterrence.

Enhance whole-of-government approach in addressing social mobility

The large and increasing income and wealth inequality in Singapore raises issues of social mobility for Singaporeans from lower-income households. A large income or wealth disparity coupled with low social mobility will



reproduce social stratification of Singapore society in a way that creates social problems of envy, inequity, injustice, alienation, pessimism and conflicts. These problems are exacerbated when the lower strata are filled with Singaporeans and the higher strata are disproportionately represented by foreigners. This local-foreigner pattern of stratification will be increasingly reinforced if the influx of foreigners to take on high value jobs (e.g., professional, managers and executives) continues to be large and rapid.

We propose three specific recommendations to address current gaps in the government's effort to address social mobility issues. First, there is a need to go beyond the reliance on the Gini coefficient to develop alternative measures for assessing income inequality and evaluating social mobility. The Gini coefficient, while useful for general purposes such as international comparisons on broad trends of income disparity, is not adequate as a measure of the basic concerns or critical issues related to social fissures due to income disparity or social class differences. The Gini coefficient does not index the specific nature of the distributional properties of income in the population that directly relate to social fissures. It also does not capture the structural and process issues related to social mobility and the specific mobility aspirations of people in a particular income bracket. It is important to identify the referent income grouping that different segments of Singaporeans aspire to, and these groupings may not correspond to the conventional decile groupings in government reports and discourse. More robust research in the social and behavioural sciences that draws on related disciplines such as economics, psychology and sociology are needed to identify the mobility aspirations, motivations and perceptions of various segments of the population as well as the predictors, correlates and consequences of these social-psychological variables (Chan 2013a).

Second, there is a need to gather data on households that will allow longitudinal tracking to assess changes over time on relevant economic and social-psychological variables. These intra-individual and intra-household changes over time provide more direct and valid assessments of social mobility than the current cross-sectional data on personal and household incomes.

Third, the study group proposes that the government enhances the "whole-of-government" approach to address social mobility in a more holistic and effective way. This requires a better integration of policies concerning education (including the linkages connecting all levels of education from pre-school to university), family and social development, manpower planning and foreigner inflow, and economic development and restructuring. Due to the long term multi-faceted and inter-related nature of social mobility issues that cut across many government ministries and agencies, the study group



suggests that the government consider setting up a national secretariat at the Prime Minister's Office to lead and co-ordinate strategic directions for research and policy related to social mobility.

Social Cohesion and National Identity

Extend considerations and criteria for granting PR status and citizenship

The selection of foreigners for granting PR status and citizenship needs to go beyond economic criteria, to explicitly consider integration potential. In addition to having family ties with Singaporeans, integration potential includes the foreigner's knowledge and respect for the major laws, values, norms and cultural practices in Singapore — especially on laws and values related to racial and religious harmony as well as dispute resolution in labour relations; and the foreigner's non-economic contributions to building social capital in Singapore, e.g., time spent in interactions with the local community, volunteerism etc. The study group proposes that the government develop multiple valid indicators of integration potential to complement the existing criteria for selecting foreigners for granting PR status and citizenship.

Revisit shared values and National Education

There is a need to discuss national values within the context of building social capital, given that the motivations for social capital and the consequences of building or eroding social capital are evaluated and influenced by the individual's and society's definitions of success and perceptions of quality of life and values concerning what is right and wrong. More than two decades ago, the government presented a White Paper that outlined five shared values for Singapore (Government of Singapore 1991). These values are: nation before community and society before self; family as the basic unit of society; community support for the individual; consensus, not conflict; and racial and religious harmony. While many if not all of these shared values for Singapore may continue to be relevant now and in the future, there is a need to revisit how their meanings and manifestations may have to be elaborated or revised given the substantive and substantial changes in the composition profile of the population and in the light of changing values and contexts. This may also include identifying new shared values such as those related to rule of law, respect for diversity, expanded definitions of meritocracy and success, and values that help set acceptable bounds or expected norms of behaviours that integrate individual freedoms and collective interests. A practical set of shared values that Singaporeans can agree on and be committed to will contribute to social capital through sense making, amicable resolution of disputes, constructive collective action, and development of trust and reciprocity norms.



The study group proposes that the review of Singapore's shared values should be guided by explicating the national values espoused in the symbols on the national flag, i.e., the five stars representing democracy, peace, progress, justice and equality; and the elements in the national pledge, i.e., unity, democracy, justice, equality, happiness, prosperity and progress. Such an exercise should involve a wide spectrum of Singaporeans, as values are only truly shared when collectively identified and shaped. Revisiting the shared values will also involve a review of the Singapore narrative on our unique circumstances as presented in National Education by the Ministry of Education. For example, while some of the unique features of Singapore that shaped our principles of governance are likely to remain fundamental and relevant (such as the country's physical constraints of size and lack of natural resources, its multi-racial society, and the existential aspects surrounding the birth of the nation), other elements such as the features of the political system and legacy of the government, may require updating. National Education is effective in contributing to social capital and national cohesion only if the Singapore narrative is evidence-based, realistic and believable so as to serve as a cognitive and affective foundation for discussion on different perspectives on needs, goals, constraints, trade-offs and gains. As values take time to develop and are reinforced through shared experiences among Singaporeans undergoing common circumstances, it is important to ensure there is proactive, continuous and quality engagement of Singaporeans who are living overseas for a significant duration.

Promote social interactions through intensification of land use and integrated living

With increasing population density, there should be more efficient intensive use of land, combined with the provision of efficient infrastructure and quality mixed-use amenities that are well integrated, accessible and affordable. This will provide a highly effective physical environment that is conducive for high-quality living that promotes social interactions and therefore social capital. For example, well integrated planning for mixed-use facilities and public and recreational spaces with equitable access for all groups will encourage social interactions among locals and foreigners as well as among people of different ethnicity, ages and social background. This will help prevent segregation and development of enclaves based on nationality or social class. Integrated living will also involve creating suitable employment opportunities in residential areas that are close to home. This work-home proximity will contribute to social interactions involving diverse groups, together with other integrative functions made possible by such proximity. These functions include enhancing part-time work, flexible work hours and work-life balance; reducing commuting time and easing the strain on the public transport system; encouraging women to enter the workforce and the



elderly to remain economically and socially active; enhancing general and asset-based volunteerism in the work-home vicinity, which contributes to the sense of community in the neighbourhood; encouraging entrepreneurship and innovation in business; and creating value-added jobs for various segments of the population (Chan 2013b).

The attractiveness of quality living in integrated mixed-use facility clusters will increase the housing and rental prices in and near these areas. It may be useful to consider implementing equitable policies that lower the cost for residents taking up job opportunities in their neighbourhood. Given the multitude of social capital implications, the study group proposes that the government explicitly incorporate social and behavioural sciences in land use and infrastructure planning, so that the resulting physical environment will positively influence social interactions and behaviours and not create unintended negative social consequences (see Chapter 4 on Land and Physical Infrastructure for further discussion on land use).

Monitor multiple indicators of social capital and social well-being to inform policies, population ranges and profiles

Citizen well-being is multi-dimensional and a large part of it consists of social well-being that goes beyond meeting material needs and wants. Research has shown that the social well-being of citizens is strongly influenced by the quality of social relations, trust, acts of kindness, volunteerism and the stability of the society (Diener et al. 2009), all of which are aspects of social capital. Both social capital and social well-being influence social cohesion, Singaporeans' rootedness to the country and the development of a strong Singaporean core.

Recently, the government presented an overview of national outcomes in the form of a performance report known as *The Singapore Public Sector Outcomes Review* (MOF 2012), which is issued every two years. Although the review provided information on how Singapore fared in six key areas of national interest by tracking several indicators across different domains (e.g., household incomes and crime rates), it did not sufficiently reflect the holistic outcomes related to citizen well-being. Specifically, the section on desired outcomes related to fostering strong families and social cohesion reported on trends in marriage, fertility and immigration; and the specific subsection on building social capital simply stated the strategic initiatives and activities that the government has planned to build community bonds. The report did not directly measure aspects of social capital or social well-being, such as empirical findings related to the state of social cohesion, inclusiveness, integration, trust, commitment and rootedness.



The study group proposes that a comprehensive framework of multiple indicators be developed to assess and track over time various aspects of social capital and social well-being for the different segments of the population. Given that population policies could affect many aspects of citizen quality of life in physical, social and psychological domains, these multiple indicators will help identify both areas of strengths and areas of concerns to serve as continuous input to population policies. Such policies include establishing realistic projected population ranges and the various population composition profiles for city planning and economic structuring to serve citizen well-being and national interests. The multiple indicators will also help inform government and citizens as they evaluate policy effectiveness with regard to policy intent, discuss policy alternatives, and make decisions in trade-off situations.

Develop effective communication and crisis management plans to address conflicts that threaten social cohesion

Conflict threatens cohesion, especially when it increases in frequency, duration and intensity. Conflict over foreigners' disregard of local norms and lack of cultural awareness and sensitivity are emotive and difficult. Local-foreigner conflicts are manifested publicly, magnified and perceived more negatively as they build on on-going concerns and underlying tensions of Singaporeans. These negative spirals lead to mutual distrust and disrespect and a divided Singapore. Effective communication and crisis management of conflicts are critical for integration. We propose that the government work with the relevant stakeholders in the public, private and people sectors, including the online community, to develop effective communication channels and crisis management plans that are proactive, prompt and practical, especially when managing adverse cases of conflicts that involve issues of local-foreigner relations and racial or religious harmony.

National Service (NS) and Service to Nation

The government recently set up the Committee to Strengthen National Service (CSNS) chaired by Minister for Defence Dr Ng Eng Hen. The study group recommends that the CSNS examine four major issues on strengthening NS and other forms of service to the nation.

Recognise NS beyond giving monetary rewards

Monetary rewards to recognise NS contributions provide explicit endorsement of the importance of NS and should continue to be applied in effective ways. However, research has shown that the provision of extrinsic rewards may reduce the desirability and intrinsic motivation for an activity (Deci et al 1999). Thus, an exclusive or primary reliance on extrinsic rewards such as monetary incentives may inadvertently produce a calculative



transactional mindset that replaces the affective and normative commitment to NS as rooted in emotional attachment to Singapore and defence as a national duty. Hence, the taskforce should move beyond *ad hoc* monetary incentives to examine how to institutionalise a holistic recognition system that will include a spectrum of impactful recognition mechanisms for those serving or have served NS. This could range from monetary rewards (e.g., NS allowances, tax rebates, national growth dividends) to benefits that are less explicitly tied to money (e.g., subsidised healthcare, access to facilities, priority in housing), or non-monetary in nature (e.g., opportunities for training, enjoyable activities, social recognition, etc.).

Consider some form of NS for female citizens

NS is a powerful site for building social capital and developing citizen commitment to the nation. However, female citizens are currently deprived of such social capital and nation-building opportunities since they are excluded from having to serve NS. The fact that there are already females serving as regular uniformed officers in the Singapore Armed Forces (SAF) and the Home Team (e.g., Singapore Police Force, Singapore Civil Defence Force) negates the argument that females are inherently not suited for military service or national defence. Within the Total Defence context, female citizens could play significant roles in both military and non-military components of the SAF and the Home Team forces. The taskforce should examine the feasibility and desirability of having a national policy of some form of mandatory NS obligation for female citizens. The NS obligation for females could take the form of similar or different but complementary roles as males serving in the SAF and Home Team forces. This will significantly contribute to human capital in NS and help mitigate manpower shortages that may occur due to fewer male citizens serving NS because of low TFR and possibly an insufficient supply of new male citizens who are required to serve NS.

Alternatively (although not mutually exclusive), the NS obligation for females could incorporate meaningful aspects of community-based work that would allow them to build ties in their community. One potential area of community-based work is in the healthcare sector, particularly in healthcare for the elderly, after receiving adequate training. The physical site for serving healthcare-based NS need not be confined to hospitals but could include elderly-care facilities in residential neighbourhoods. Women could also be assigned to serve their NS duty in healthcare facilities near their homes, and this proximity could mitigate disruption to family life and increase resident acceptability of locating elderly-care and healthcare facilities in their neighbourhoods. If adequately integrated with other neighbourhood activities and programmes, this arrangement of NS duty for females could



also increase community bonding in the neighbourhood and contribute to building social capital.

Use NS and “NS-in-the-community” as a strong indicator of commitment for reviewing residency and citizenship

The NS obligation should be a critical test and measure of the individual's and their families' commitment to the nation, and its current strict application to second-generation PRs is necessary due to the criticality of NS and social equity. Hence, the taskforce should consider the desirability of implementing a new policy, where immigrants or their children who fail to serve mandatory NS are unable to renew permanent residencies or receive citizenship for the whole family, and where citizenship is granted only if the entire family takes up citizenship (including potentially NS-liable children). This new policy could attract foreigners who are serious about committing to Singapore as PRs and new citizens and produce new citizens who have high integration potential and rootedness to Singapore. It could also address perceptions of unfairness among Singaporeans about the current situation in which some PRs could enjoy benefits similar to citizens without them or their family members having to serve NS.

Shorten the duration and increase the quality of NS

The taskforce should consider if it is possible to shorten the duration of NS by increasing the efficiency and effectiveness of training in NS and the quality of the NS experience. This is likely to be even more feasible if females also serve NS. With the significant increase in number of citizens serving NS due to inclusion of females, it may allow the current duration of NS to be shortened substantially without a loss in operational efficiency and readiness, for instance, shortening the NS period from the current two years to 1.5 years. The shortening of NS will allow the entire cohort of young Singaporeans and PRs who have served NS to enter university or the workforce earlier than the current age. A by-product of the shortened period of NS is that suitable PRs contemplating taking up Singapore citizenship may find the prerequisite condition of serving NS more palatable.

A national-level task force, consisting of representatives from the public, private and people sectors, could be set up to examine the issues discussed above. The taskforce should complement the work of the CSNS and ongoing national public engagement efforts. This taskforce and the CSNS should also seek, analyse and incorporate feedback from the public on these issues. Given the national importance and security, economic, financial, legal and social implications of the issues, the study group proposes that the taskforce's findings be incorporated into a government paper for discussion in Parliament.



7.5 CONCLUSION

Social capital is critical to Singapore's survival and progress given the unique features of the country relating to its people, government and environment. Social capital is multi-dimensional and dynamic and hence our "whole-of-society" effort to ensure it develops positively rather than negatively will need to be multi-faceted, accompanied by continuous monitoring and vigilance. Singapore's population challenges have added to the complexity, consequences and criticality of social capital and its development. Organic development of social capital will occur but our policies and actions, particularly those in response to the population challenges facing us, will influence the direction in which social capital proceeds. This chapter has identified what the study group believes to be the key issues of social capital that need to be addressed urgently and adequately. The group hopes the recommendations in this report will provide a framework and springboard for constructive discussions in public discourse and serious deliberations by policymakers.

7.6 REFERENCES

- Chan, D. 2002. "Longitudinal modelling". In Rogelberg, S. (ed.) *Handbook of research methods in industrial and organisational psychology*. Malden, MA: Blackwell, 412–30.
- Chan, D. 2012a. "The 5C challenges of cohesion", *The Straits Times*, 15 June.
- Chan, D. 2012b. "Five Cs to manage integration", *The Straits Times*, 16 June.
- Chan, D. 2013a. "Population matters: Contributions from behavioural sciences". Paper presented at the Behavioural Sciences Conference 2013, Singapore, 7 March.
- Chan, D. 2013b. "Population priorities and perceptions", *The Straits Times*, 4 February.
- Coleman, J. S. 1988. "Social capital in the creation of human capital", *The American Journal of Sociology* 94: 95–120.
- Deci, E. L., R. Koestner and R. M. Ryan. 1999. "A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation", *Psychological Bulletin* 125: 627–88.



- Diener, E., R. E. Lucas, U. Schimmack, and J. Helliwell. 2009. *Well-being for public policy*. Oxford: Oxford University Press.
- Government of Singapore. 1991. *Shared Values*. Government of Singapore White Paper. Singapore: Singapore National Printers.
- Koh, G. and D. Soon. 2012. "The future of Singapore's civil society". In *Social Space 2012*. Singapore: Lien Centre for Social Innovation and Singapore Management University.
- Kong, L. 2010. "Global shifts, theoretical shifts: Changing geographies of religion", *Progress in Human Geography* 34: 755–76.
- Leong, C. H. 2012. *Social markers of integration: What matters most to Singaporeans?* Paper presented at the Institute of Policy Studies Conference on Integration, Singapore.
- Ministry of Finance, Singapore (MOF). 2012. *The Singapore Public Sector Outcomes Review*. <http://app.mof.gov.sg/spor.aspx>.
- National Education website. www.nie.edu.sg/index.htm.
- National Population and Talent Division, Singapore (NPTD). 2013. *Population White Paper: A sustainable population for a dynamic Singapore*. Singapore: Prime Minister's Office.
- Ng, E. H. 2013. Speech by Minister for Defence Dr Ng Eng Hen at the Committee of Supply Debate on the Ministry of Defence, 12 March, Singapore.
http://www.mindef.gov.sg/imindef/press_room/official_releases/sp/2013/12mar13_speech.html#.Ukw7XxaBIUs.
- Population in Brief 2013*. Singapore: National Population and Talent Division, Prime Minister's Office; Singapore Department of Statistics; Ministry of Home Affairs; Immigration & Checkpoints Authority.
- Prime Minister' Office, Singapore (PMO). 2012. "Restructuring of MCYS and MICA and establishment of new Ministry of Culture, Community and Youth (MCCY)", press release, 31 July.
- Putnam, R. D. 1993. "The prosperous community", *American Prospect* 7: 35–42.



- Putnam, R. D. 1995. "Tuning In, Tuning Out: The strange disappearance of social capital in America", *Political Science and Politics* 28: 664–83.
- Stone, W. 2003. "Bonding, bridging and linking with social capital", *Stronger Families Learning Exchange* 4: 13–16, Spring/Summer.
- Tajfel, H. and J. C. Turner. 1986. "The social identity theory of inter-group behaviour". In S. Worchel and L. W. Austin (eds.), *Psychology of intergroup relations*. Chicago: Nelson-Hall.
- Tan, E. S. 2004. "Does class matter?" In *Social stratification and orientations in Singapore*. Singapore: World Scientific.
- Wong, L. 2013. Speech by Acting Minister for Culture, Community and Youth Mr Lawrence Wong at the Committee of Supply Debate on the Ministry of Culture, Community and Youth, 15 March, Singapore. <http://app.mccy.gov.sg/Newsroom/SpeechActingMinisterPartI.aspx>.
- Yeoh, B. S. A., and W. Lin. 2012. "Rapid growth in Singapore's immigrant population brings policy challenges", *Migration Information Source*, April.
- Yeoh, B. S. A., H. L. Chee and T. K. D. Vu. 2013. "Commercially arranged marriage and the negotiation of citizenship rights among Vietnamese marriage migrants in multiracial Singapore", *Asian Ethnicity* 14: 139–56.



Appendix

POS2050 study group members and acknowledgements



APPENDIX

STEERING COMMITTEE MEMBERS

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