Policy Analysis Exercise (PAE)

Old Age Income Security in face of changing family structure in Singapore: a comparative study with the experiences of South Korea

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Executive Summary

The elderly in Singapore have typically relied on their families for support with the familialist system with children being expected to care for their parents. This family support system however has come under stress with the economic and demographic changes in Singapore. For the current elderly, the impact will be greater as they have little time to prepare for any shocks to their old age income security.

This Policy Analysis Exercise (PAE) aims to study the old age income security of elderly aged 60 and above in Singapore. This will be done by comparing the income and expenditure amounts and sources of the elderly. A comparison is made with South Korea which faces similar challenges as Singapore with a key difference in the pension system where Singapore is a funded pension system while South Korea's is a pay-as-you-go system. Our research questions are:

What should Singapore government do in order to improve old age income security of elderly, learning from the experiences of South Korea?
a. What is the current status of old age income security in Singapore and South Korea by comparing old age income and expenditure?
b. How will old age income security evolve with changing family structure?

We find that expenditure mix of elderly of Singapore and South Korea is largely similar. However, in terms of income sources, Singaporean elderly continue to have high reliance on transfers from children while South Korean elderly's reliance have been falling as family support has dropped more for them. Despite the different pension systems, elderly in both countries rely very little on the pension systems. This then puts several groups of elderly especially vulnerable when there is change in family structure: female elderly, older elderly and elderly that do not have family support.

By comparing the policies, we find that Singapore continues to encourage family support while South Korea's policies are directed at the elderly themselves. South Korea has been concentrating on building up the pension system but due to the immaturity and lack of coverage, their elderly still receive little support. Singapore in comparison has a mix of policies targeting income and expenditure and continues to encourage "family as first line of support". However, the vulnerable groups receive little support from the governments.

The policy lessons from the comparison between Singapore and South Korea reminds us of the need for timely response for policy changes. As we expect more retiree households in Singapore and family structure to continue to evolve, policies need to be responsive to ensure that there is sufficient preparation. Coverage of policies is also especially important and it is insufficient to

rely solely on the pension system. As such, our policy recommendations are built on the basis of the need for continued policy mix in Singapore with more in depth consideration of how to better help elderly in Singapore, including those in the vulnerable groups.

Acknowledgements

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Finally, we would take this opportunity to thank LKYSPP who initiated the Policy Analysis Exercise and gave us the golden chance to experience this amazing year-long journey. The school has shown tremendous support to our work by providing financial aids and organizing the PAE Conference.

I) Introduction

The elderly in Singapore have typically relied on their families for support with the familialist system with children being expected to care for their parents. This family support system however has come under stress with the economic and demographic changes in Singapore. For the current elderly, the impact will be greater as they have little time to prepare for any shocks to their old age income security.

This Policy Analysis Exercise (PAE) aims to study the old age income security of elderly aged 60 and above in Singapore. Mainly our interest is what are the various policies affecting old age income security and evaluate them based on the criteria of effectiveness, fairness and feasibility. From here, policy recommendations are drawn to improve old age income security of the elderly.

This will be done by comparing the income and expenditure amounts and sources of the elderly. A comparison will be made with South Korea which faces similar challenges as Singapore. A key difference between the two countries is the pension system where Singapore is a funded pension system while South Korea's is a pay-as-you-go system. We will then analyze how changing family structure will affect the dynamics of old age income security and the at-risk groups of elderly if any.

As such, our research questions are:
What should Singapore government do in order to improve old age income security of elderly, learning from the experiences of South Korea?
a. What is the current status of old age income security in Singapore and South Korea by comparing old age income and expenditure
b. How will old age income security evolve with changing family structure?

II) Client Information

The client of this PAE is the International Longevity Centre Singapore (ILC-Singapore). An initiative of Tsao Foundation, ILC-Singapore aims to promote the well-being of older people and contribute to policy development through supporting policy, practice and capacity-building. This is done through creating stakeholder platforms between the community, policy makers, academia, practitioners and private sector and research.

III) Background of Policy Problem

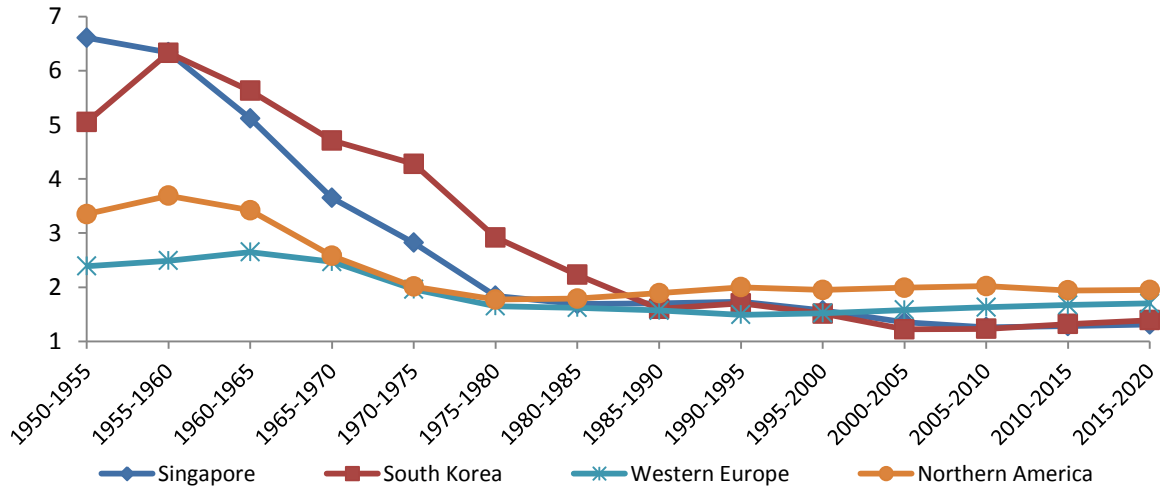
A) Singapore's demographic challenge

Singapore is not the only country facing demographic changes and an aging population. Many of the developed countries are also seeing their population aging with median age of the population increasing steadily. However, what stands out for Singapore is the rate of aging. This has a direct impact on the amount of time that the government has to prepare policies and institutions to manage the aging population.

With the success of family planning policies put in place in the 1960s and 1970s, the total fertility rate (TFR) of Singapore fell below the 2.0 since the late 1970s (Figure 1). Coupled with changing marriage and parenthood decisions by Singaporean, the TFR has been around 1.3 to 1.2 in the past decade.[1] This low birth rate trend is coupled with the cohorts of Baby Boomers turning 65 from 2012 onwards. It is estimated that over 900,000 Baby Boomers will turn 65 by 2030.[2]

Figure 1: Rapid fall in total fertility rate in Singapore and South Korea

Source: World Population Prospects: 2012 Revision, United Nations, Department of Economic and Social Affairs



The interaction of falling TFR and rising proportion of population reaching age 65 has multiple effects on Singapore. Due to a shrinking workforce as the Baby Boomers retire, the old-age support ratio is expected to decline from 5.9 citizens in working-age band of 20-64 years supporting one citizen aged 65 and above in 2012 to a ratio of 2.1 in 2030.[3]

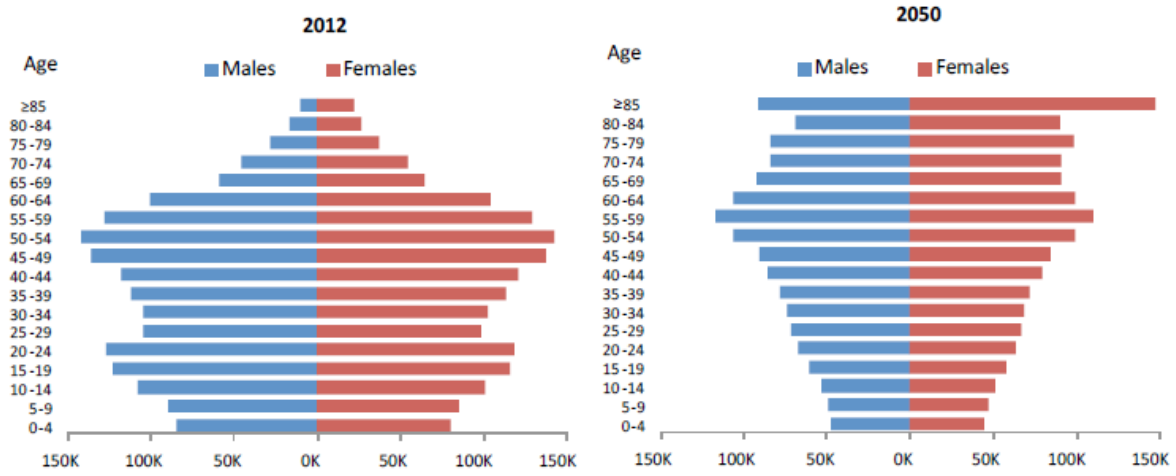
Another interpretation of this falling ratio is that there is also a smaller family size supporting each individual aged in Singapore. As TFR fell, average household size in Singapore has fallen

[1] National Population and Talent Division, A Sustainable Population for a Dynamic Singapore, , p. 9-13
[2] Ibid.
[3] Ibid.

from 4.25 in 1990 to 3.53 in 2012.[4] These demographic challenges pose important challenges to the care of the elderly in Singapore, including old age income security.

Figure 2: Singapore's citizen age profile

Source: Department of Statistics and National Population and Talent Division



Note: Assuming current birth rates and no immigration from 2013 onwards.

B) Changing family structure and the elderly in Singapore

Singapore's societal values have been largely driven by familialist values such as Confucian values that promote filial piety and respect for elders. This has also been ingrained into the social policies surrounding the care and support of elderly in Singapore, with the government encouraging families as the first line of support.[5] However, in view of the changing family structure, it throws into question how valid this assumption of family as the first line of support can be held.

In the National Survey of Senior Citizens report 2011 (NSCC 2011)[6], some observations in how changing family structure is affecting the elderly in Singapore:

i) Average household size of senior citizens aged 55 and older was 3.3 persons. This fell from 4.4 in 1995 and 3.7 in 2005. Across the age groups, there seemed to be a downward trend in terms of household size as age increases.

ii) Among the population aged 55 and older, 15% lived in one-person households. This jumped from 6% in 2005. The proportion of 2-person households also increased by 2% from 20.7% in 2005.

iii) In 2005, the majority of the respondents aged 55 and older reported that they depended on the family for all aspects of support - when they were ill, required financial assistance or when they needed to talk to someone. Overall, compared with survey data from 2005,

[4] Department of Statistics, Population Trends 2013, p. 15

[5] Ministry for Social and Family Development, ComCare and Social Support Division: What we do

[6] Kang and Yap (2013)

there has been an increasing reliance on the family by the elderly during times of illness (93%) and when in financial need (88%).

iv) 21% of respondents had a caregiver. The oldest respondents aged 75 and over, females and in particular those who had a disability were more likely to have a caregiver than other respondents. Spouses were the main caregivers for 41.4% of the respondents who had one. This was followed by daughters (20%), sons (15.2%) and maids (14.4%).

As we see in this survey, while the demands of the elderly increase, family structure changes have caused stress points in their care. This includes financial support of the elderly.

C) Research on old age income security in Singapore

The income of elderly is generally from the following sources:

i) Salary and wages
ii) Government social spending
iii) Pension benefits
iv) Familial support
v) Income arising from household wealth

In Singapore, an important institution in the old age income is the Central Provident Fund (CPF). It was established in 1955 under the British colonial government to enforce compulsory savings for working Singaporeans to fund their retirement. This was later expanded to include healthcare and housing needs. As a funded system, where pension values depend on contributions and investment returns earned, each individual is responsible for his or her own retirement pension income.

Studies have previously been done analyzing the CPF scheme. The studies (Asher, 2004, 2013; Hui, 2012) have questioned the adequacy of the CPF system, observing the usage of the savings in CPF for other uses such as housing, health and education. Furthermore, due to the reliance on the CPF system, female elderly are especially exposed to old age poverty (Lee, 1999).

As such, studies have focused on how the CPF system should be improved to help old age income security such as changes in improvements in returns of CPF savings through investment returns or interest rates (Asher, 2004, Hui, 2012) and limits in housing expenses (Chia and Tsui, 2012). Other changes proposed include the use of annuities (Chia and Tsui, 2003) and the use of reverse mortgage to further finance retirement income of Singaporeans (Chia and Tsui, 2005).

Studies on familial support and inter-generational support highlighted the motives of exchanges such as exchanges in services between the elderly and their children, with more financial support received for the baby-sitting and chores they provide (Mehta, 1999; Verbrugge and Chan, 2008). A review by Ng (2011) remarked that elderly in Singapore has high reliance on family support in

the old age income security but with the mix of the defined contributions scheme and new social risks including smaller family size, makes the arrangements particularly vulnerable. Ng further comments that an understanding of the interaction of retirement income policy and family support and its potential outcomes for different groups of elderly is however lacking.

The literature thus presents a gap in studying the interaction of policies, family changes and the old age income security of the elderly. Due to the different sources of income and consumption of the elderly, how different policies can affect their old age income security deserves further analysis, especially for the current elderly who has fewer choices in terms of preparation for their retirement. The insights of how policies can be better used to help the currently elderly in their income and consumption expenses will also assist ILC-Singapore to study how it can better assist the elderly in Singapore in terms of their old age income security.

IV) Analytical framework and research methodology of comparative study

In order to examine how different institutions and policies would result in different outcomes of old-age income adequacy, cases must be selected for comparison based on the principle that the two cases should be different in their institutional settings related with elderly income while similar in all other aspects.

A) Why compare Singapore and South Korea

1) Many similarities yet a key difference

Singapore and South Korea had similar economic development experiences where both countries emerged from war and independence to decades of high economic growth. The early years of independence also saw dominant governments in both countries with a one-party dominated democracy in Singapore and military dictatorship in South Korea. Economic growth was top priority for the countries as a source of wealth and stability and social policy was typified as developmental welfarism with social policy driven by the need to promote economic growth.[7] As such, most of the social expenses were in social investment programs such as education and health. With young populations and political voice dominated by the governments, the demand for social protection with regards old age income was thus low.

Ideologically, both Singapore and South Korea are typified to a familialist heritage dominated by Confucianism which emphasizes a strong sense of work ethics, importance placed on education and self-discipline, filial piety, gender role division and respect for the elders and authorities.[8] There is an emphasis on families with traditional gender roles such as the married women's responsibility to parents-in-law and reliance and subordination to men.[9] Hence, the family is a

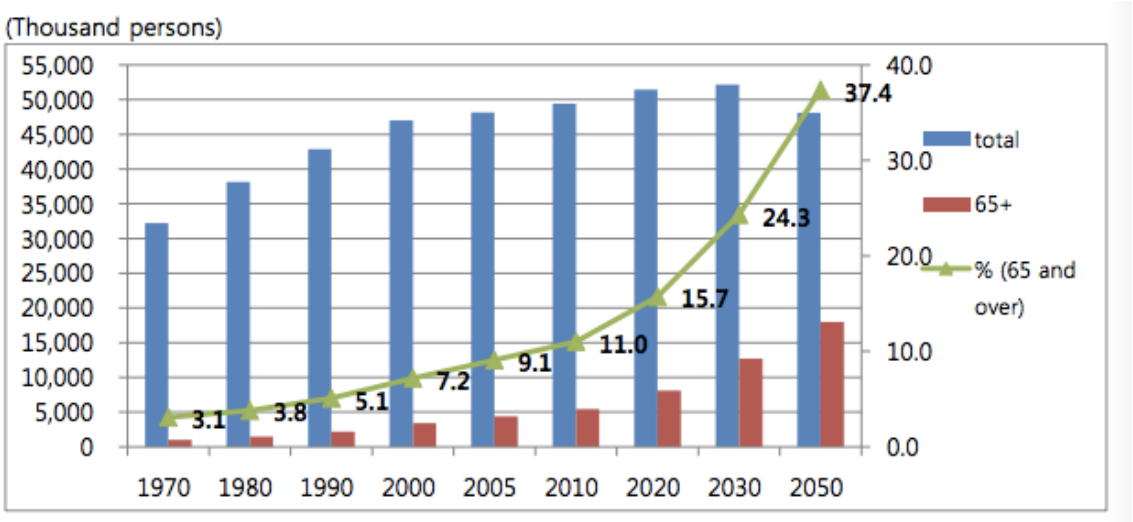
[7] Choi, Y. J (2013)
[8] Peng, Ito. (2008)
[9] Sung, Sirin (2003)

very important social support structure for the individual, especially the elderly. Accordingly, the children should support the elderly in the family and care duties falling largely on the women.

Similar to Singapore, South Korea is also aging rapidly. The proportion of elderly in South Korea aged 65 and above doubled from 1990 to 2010, and is expected to reach 37% by 2050. Average life expectancy is expected to be 84.3 in 2030 and 87.4 in 2050, while TFR will continue to fall from 4.53% in 1970 to 1.08% in 2050. As a result, elderly dependency ratio which was 15% in 2010 is projected to be 71% by 2050.[10]

Figure 3: Long term population projection in South Korea

Source: National Statistical Office



Meanwhile, children's support for the elderly in South Korea has dropped compared with older generations with the number of single elderly household expanding. As such, there is increasing pressure for the elderly in South Korea to find ways to support themselves.

However, a key difference from Singapore is the pension system. South Korea's pension system is that of a pay-as-you-go system while Singapore is a funded system. This difference in pension systems between Singapore and South Korea allows us to analyze the different policies in place and how they affect old age income security in both countries.

2) Pay-as-you-go pension system versus funded pension system

Under pay-as-you-go system, the employee's pension benefit entitlement is predetermined by a formula based on working period and income level of the individual. Recipients can claim a set monthly amount upon retirement with guarantees for life. This is funded through the contribution of the current workforce. In comparison, under the funded system, certain contributions are made to the employee's individual account during employment through employer and self-

[10]National Statistical Office, 2011Statistics on the Aged

contribution. The final benefit amount is based exclusively upon the contribution to, and investment earnings of the plan.
There are strengths and limitations of both systems. A funded system relies more on the situation of the international capital market while the dependency of a pay-as-you-go based system on the domestic labor market. For individual pension participant, a pay-as-you-go plan is preferential to funded system when the sum of the rates of growth of population (n) and of real wages (g) exceeds the rate of interest (r). However the pay-as-you-go system stands the risk of a low real rate of investment return and low asset prices due to unexpected persistent inflation, a high capital intensity and other unforeseen events over which society has no control. In addition, the aging-linked perpetual rise in pay- as-you-go contribution rates may lead to higher labor costs and labor market distortions, hence a higher future unemployment level and a smaller coverage, thereby deteriorating the conditions of long-term viability.

In contrast, one of the most important features of a funded system is that its premium payments are less likely to be regarded as taxes rather than as own savings for an old- age provision, thereby avoiding to a large extent negative labor market distortions and probably giving rise to an increased labor-force participation. Therefore funded system would be beneficial for the economy as a whole, especially in countries where employees are heavily engaged in the informal sector.[11]

Funded system being financed by the individual is deemed more financially sustainable through demographic changes. In an aging society, with a smaller working population, the amount received into the fund will reduce over time if tax rates remain unchanged while the amount being withdrawn continue to increase as more retire.

However, due to the individualized benefit system of a funded system, the amount of retirement funds is dependent on one's working life experience. Those who have spent little or no time in the workforce or those who earn little and therefore save little, will end up having lower amount in their account. In addition, as an individualized system, there is no redistribution mechanism in a funded system to help those with lower retirement savings.

Another possible issue about the funded system is about inflation-proofing the benefits. Under the pay-as-you-g system, as it is funded by the current generation of workers, if there is a need to increase the benefit amount to be paid to the current retirees due to inflation, the government can technically increase the amount to be taxed from the current workers and allow the benefits to raise in tandem with inflation. Funded system being reliant on the interest received on

[11] Kune, J. (2001)

individual's account, may see difficulties in inflation-proofing if the rate of return is lower than inflation rate.

Hence, for both systems their strengths and limitations are affected by an aging population very differently. In this regard, by comparing Singapore's funded and South Korea's pay-as-you-go systems, we can see how both systems work and the lessons learnt in the context of both countries.

Choice of using income versus consumption as analytical tool

The conventional measure of social security system used in financial planning literature is the Income Replacement Rate (IRR), which measures the income in retirement needed to maintain pre- retirement living standards. However, our study will concentrate on comparing consumption and income instead of using the IRR.

This is because, considering the different statistical methods and dimensions, the figures were not derived from the same controlled variables. In Singapore, IRR was calculated through CPF while in South Korea the official IRR only represents target replacement ratio of National Pension System, excluding other supplementary pension systems. For example, some 70% of the elderly population in Korea will also receive additional savings from the newly introduced Basic Old-age Pension. As such, IRR is an indicator commonly used to explain the adequacy of pension system, but it is not sufficient to provide information with regard to the equity, sustainability and feasibility.

By taking a comprehensive analysis through looking at income and expenditure sources and amounts, we will be able to see the basic adequacy of the old age income, i.e. whether income exceeds consumption. Allowing that elders with inadequate income may adjust their consumption, we will also be able to study how different goods and services are prominent in their consumptions baskets and how policies may affect different components of income and consumption.

Limitations in comparison

While it would be more ideal to make comparisons between Singapore and Seoul, a city in South Korea which shares similar size of economy and population, our research is limited to data availability for such a comparison to be possible. Furthermore, considering the fact that the Korean population is somehow concentrated in urban areas (over 80% of urbanization[12]) with Seoul accommodating more than one fifths of the old-age population in the whole country, adoption of data covering the whole country would not deviate much from data covering only urban areas.

[12] Data from Korean Statistical Information Service (KOSIS) and own calculation

More importantly, the size of population does not necessarily influence old age income adequacy of an economy. Instead the structure of population has a stronger effect, hence making comparisons between South Korea and Singapore instead of Seoul and Singapore which has similar population trends and structure would not significantly affect the reliability of our conclusion.

B) Ideological changes and policy impact

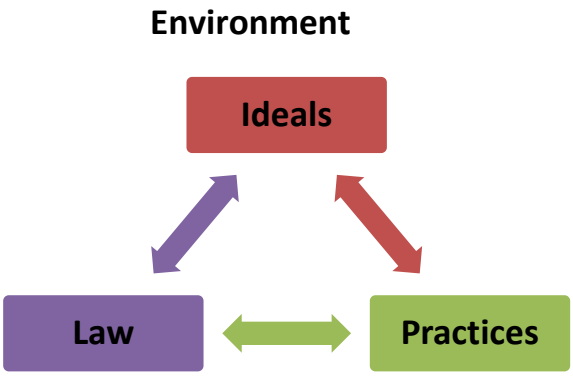
As earlier mentioned, the familialist system such as Confucian heritage ideology drives the emphasis on families to support the elderly in Singapore and South Korea. However, ideology and what is actually being done differs. Martin (1990) examined the changes to the Confucian heritage as experienced in China, Japan and South Korea. She uses the lens of changes in ideals, laws and practices to study the changes in these countries. Ideals typify the ideology norm in the society, laws set by governments to regulate the behavior of people and practices being the actual actions of the people. While it would be expected that laws and practices will be aligned with ideology, Martin illustrates that they are neither aligned nor static; instead there is constant tension between them as the three interacts with each other.

This provides a suitable lens for our analysis. In both countries, the governments' adoption of ideology of Confucian heritage of family support interacts with new values that the people have. Laws can be reflected in the policies tools used by government to influence the behavior of people and organizations to be in line with their policy goals. However, some policy goals may or may not support this Confucian heritage such as the encouragement of women to join the workforce is counter to the Confucian heritage of women as the caretaker of the family.

The actual practices of the people reflect in part of the interaction of ideology and practices but also the changing environment. For our analysis, the main environmental change is from demographic changes that resulted in family structures changing. This will then affect what the people actually do as they try to cope with the new environment of smaller families.

Figure 4: Interaction of ideals, law and practices

Source: Adapted from Martin (1990)



C) Research methodology

a. Research items

As a basis of comparison of the income sources for the elderly, the five components of income resources under our analysis on how much contribution are in each component as earlier mentioned are:

i) Salary and wages
ii) Government social spending
iii) Pension benefits
iv) Familial support
v) Income arising from household wealth

To further examine the old age income security, other than income sources, we would need to look at the consumption baskets of the elderly. This is necessary as we acknowledge that the consumption items and needs of the elderly will be different from the rest of the population and an analysis of the consumption basket is required for us to compare against the income level of the elderly. This will then allow us to have a better sense of the level of adequacy of their income in meeting their needs. Consumption items include but are not limited to:

i) Housing
ii) Daily expenses e.g. food and transport
iii) Health expenses

From here, we would then be able to identify different groups of elderly for our analysis. Through this, we will further look at these different groups of elderly in society and identify the at-risk elderly affected by the changes in family structure, i.e. when the hypothesis of family as the first line is support is no longer held.

In addition, this provides the basis for us to analyze the different policies in place in Singapore and South Korea in the area of old age income security. One of the key areas of analysis will be

in the comparison of pension systems of both countries, i.e. how a funded system in Singapore is able or not able to support income security compared to the pay-as-you-go system in South Korea in this environment of changing family structure. Other policies in our analysis will include legislations and policies such as the Maintenance of Parents Act and healthcare policies that affect old age income security in Singapore.

b. Research steps

For our research, we will mainly apply qualitative methods to conduct this study based on non-interview research. We will conduct extensive reviews of news reports, policy papers, academic reports, and civil society reports during the initial stages of, and throughout, the research process. Global evidence will also be sought in the area of old age income security. Data collected from sources such as UN, ADB, ILO, regional intergovernmental bodies, and domestic government agencies are also often analyzed to prove the key indicators related to our research.[13]

Comparative study method is adopted throughout the whole research with parallel and systematic comparisons made at each session between Singapore and South Korea. These two countries are selected based on the case selection strategy of "Method of Difference" which argues that two cases with all dimensions similar except for the key dependent and independent variables could provide solid ground for the causal relation between the key dependent and independent variable.

c. Evaluation criteria of policies

Following the comprehensive analysis of elderly income adequacy situation in South Korea and Singapore, current policies in the area of old age security would be examined. On top of that, policy recommendations will be then proposed to the Singapore government accordingly, together with a detailed evaluation of each policy aiming to help in prioritizing them. Three criteria are taken in our evaluation:

i) ***Effectiveness***:
To what extent the policy could achieve the goal of improving income adequacy for the Singaporean elderly?

ii) ***Fairness***:
Is the policy is addressing only part of the elders group or is targeting all the elders in Singapore?

iii) Feasibility:
Would the policy be feasible for implementation or restricted by situations such as insufficient fiscal capacity, lack of public support and the difficulty in identifying targeted people?

[13] Human Rights Watch, Our Research Methodology.

While these criteria are largely values based, this is necessary as the issue of old age income security is an emotive issue that affects the whole population. Be it that they are the elderly or they are the families providing support to the elderly in their families to the working population having to fund the policies through their tax contribution, all are affected at one level or another.

Based on the above mentioned discussion, we are able to develop an in-depth rounded understanding of the state of aging in the area of old age income security and propose policy recommendations with a standing of Singapore government's perspective.

d. Research deliverables

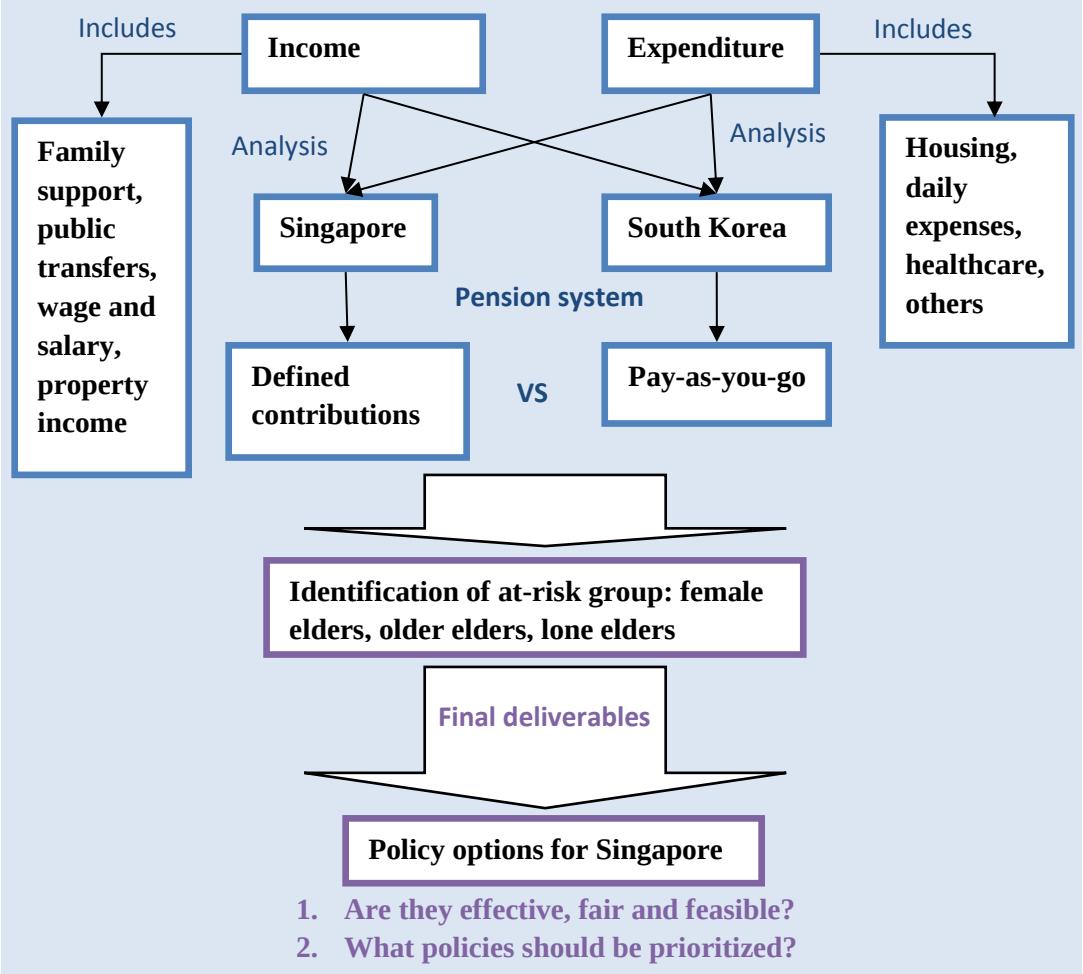
As such, through our PAE study, the report would include key contributions as follows:

i) Assess the current status of old age income security, considering the different income sources and consumption baskets and pension systems and identify the at-risk elderly group, i.e. those who are the most vulnerable to external shocks under changing family structure and upon whom based specific policies could be directed on this target group.

ii) Predict how changing family structure will impact the old age income security of elderly in Singapore.

iii) Provide policy recommendations through the comparisons between Singapore and South Korea based on the criteria of effectiveness, fairness and feasibility, to better adapt policies to the changing family structure. Overall scores based on our evaluation will be displayed for each recommended policies for further purpose of policy prioritization.

Figure 5: Framework of analysis and deliverables



V) Comparative Analysis

A) Old age income adequacy: Income versus expenditure

SINGAPORE

The retirement income adequacy in Singapore will be examined by looking at the retirement income and comparing it with the retirement expenditure. Our analysis will be done using information released on the Household Expenditure Survey 2012/13[14] (HES12/13) by Singapore

[14] Selection of sample was based on the sampling frame of residential units in Singapore maintained by the Singapore Department of Statistics. The sample was selected using a two-stage cluster design. The sampling

Department of Statistics in September 2014 and the NSSC 2011[15] commissioned by Ministry of Social and Family Development (MSF).

1) Elderly income

The released data in HES12/13 classified age groups as aged 50-64 years and aged 65 years and above. For our study, we will concentrate on those with household heads aged 65 and above as our interest group are elderly aged 60 and above. Of the 101,497 households with heads over 65 years old, 48.8% has no children in household and 52.2% with children. Overall, a larger proportion of households with no children belong to lower average monthly income groups compared to those with children in the households (Figure 6) and being in the lowest income quintile (Figure 7).

Figure 6: Average monthly income of households with head of households aged 65 and above

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

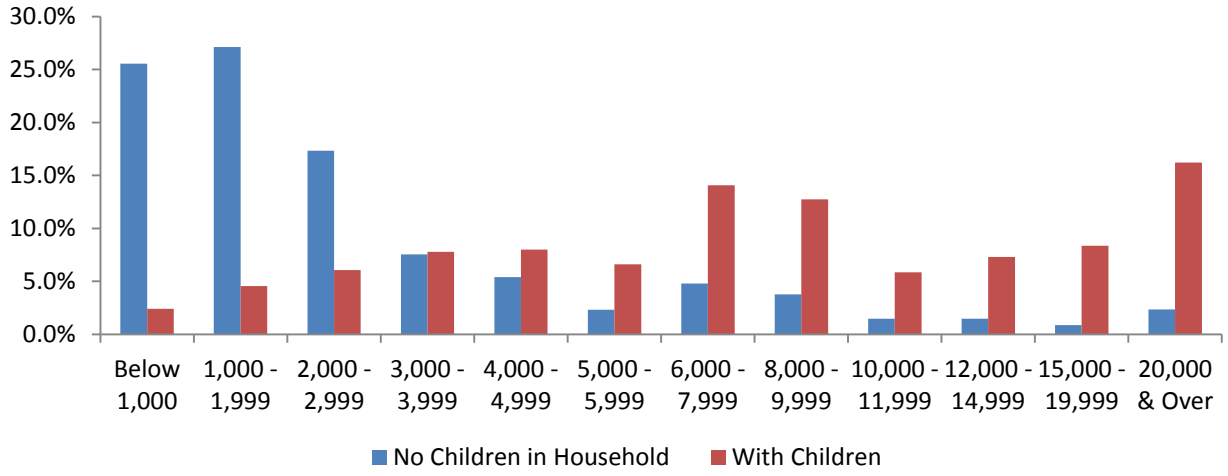


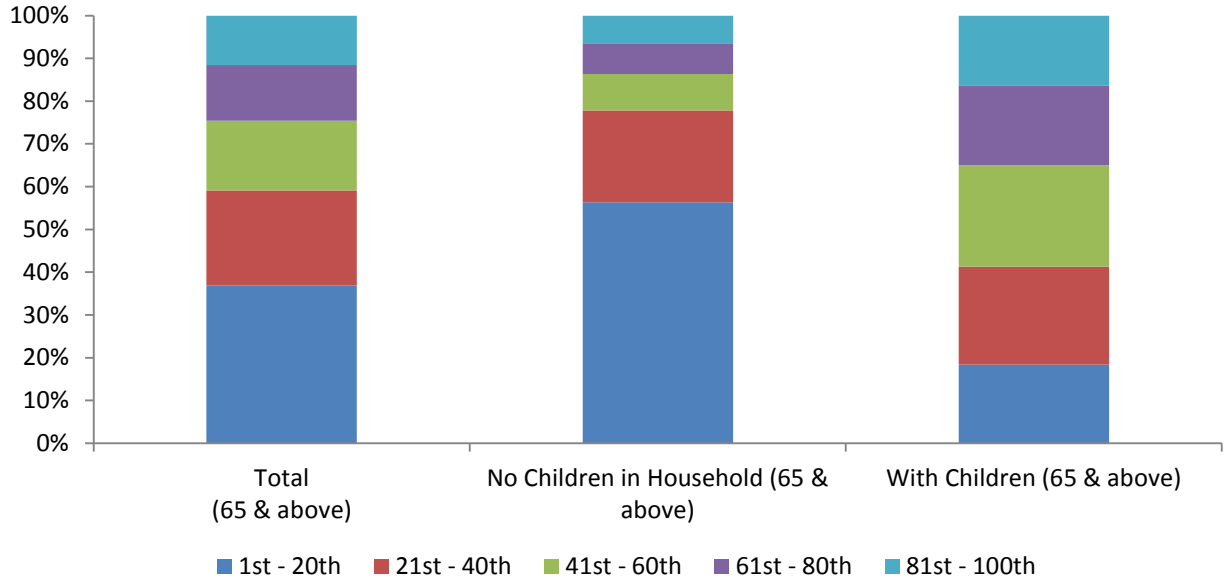
Figure 7: Income quintile[16] based on average monthly income of households with head of households aged 65 and above

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

method yielded an overall equal probability and self-weighting sample of 11,050 dwelling units and representative of the broad national dwelling type distribution.

[15] Approximately 5,000 senior citizens aged 55 and above were interviewed.

[16] Based on ranking of all resident households by their monthly household income from all sources (including employer CPF contributions) per household member.



To further understand the sources of income of the elderly, we refer to the NSSC 2011. Among the surveyed (Table 1), income transfers from children remained the main source of income for the elderly, with increasing importance for those in the older age groups. Female elderly (74.8% in 2011) are also more reliant on these transfers compared to male elderly (57.5%). Income transfers from spouses drop in importance across age groups while income transfer from other family members inch up.

Another important source of income for the elderly is their own personal wealth and investment returns, with their personal savings being the 2nd most important source. The importance of personal savings increased in 2011 compared to 2005 and across age groups, with the older elderly relying more on their personal savings than younger elderly. Male elderly are more likely to have other sources of investment income compared to female elderly.

Public transfers in terms of public assistance and other assistance scheme factored low in important sources of income. This is reflected in the low level of ComCare Long Term Assistance recipients which poor elderly who are unable to work and have little family support are eligible for (3,047 in 2012 and 3,164 in 2013).[17] Older elderly are more likely to depend on public assistance, suggesting that older elderly experiences a more acute fall in income, having little savings left, having no family members to care for them such that they need to seek public assistance.

Despite the CPF being the main policy pillar for elderly retirement income in Singapore, only 6.7% cited it as the main source of income in 2011, falling from 13.9% in 2005. This is despite that the surveyed in 2011 would have had a longer period of time under the CPF system

[17] Ministry of Social and Family Development, Singapore Social Statistics in Brief 2014

compared to those surveyed in 2005. This may be due to withdrawal for payment of housing or upon withdrawal rate or simply that there is insufficient savings. As such, it suggests limitations in relying on the CPF system alone for income adequacy for the elderly.

Table 1: Main sources of income by gender and age in Singapore, 2011 and 2005 (%)
Source: National Survey of Senior Citizens in Singapore 2011, MSF

	Total		Male		Female		Age group (2011)		
	2005	**2011**	**2005**	**2011**	**2005**	**2011**	**55-64**	**65-74**	**75 and above**
Income transfers from children	66.0	66.7	54.0	57.5	77.3	74.8	58.3	76.4	80.2
Personal Savings	36.7	38.9	42.3	47.9	32.0	46.6	43.3	51.2	54.6
Paid employment	26.2	38.9	38.2	48.3	15.6	30.6	52.2	29.2	8.0
CPF Savings	13.9	6.7	20.1	9.0	8.4	4.7	6.9	7.9	4.0
Income transfers from spouse	11.9	14.9	2.7	8.6	20.3	20.5	20.4	10.1	3.6
Profits	-	3.7	-	5.2	-	2.3	4.3	3.7	1.4
Income transfers from other family members	2.5	4.0	2.2	3.0	3.0	5.0	3.5	4.0	6.1
Workfare	-	1.8	-	2.0	-	1.7	1.8	2.8	0.4
Pension	1.8	2.3	2.7	3.3	1.1	1.5	1.4	2.5	5.3
Rental Income	1.3	2.6	1.3	2.4	1.3	2.7	2.7	1.9	3.1
Interests/Dividends	1.2	5.0	2.1	7.0	0.4	3.2	4.4	5.8	5.7
Annuities	0.9	6.1	1.3	8.3	0.6	4.1	5.6	9.2	2.4
Public Assistance	0.6	1.1	0.7	1.6	0.5	0.7	0.8	1.3	2.1
Community Development Council Assistance	0.3	0.4	0.3	0.3	0.3	0.5	0.4	0.5	2.1
Charity	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.4
Others	1.2	0.0	1.7	0.0	0.7	-	0.0	0.0	0.0

Employment income

As seen in Table 1, employment income is the 3rd main source of income for the elderly. However, the importance falls with age from 52.2% for age group 55-64, to 29.2% for age group 65-74 to 8.0% for age group 75 and above. A higher proportion of male elderly sees employment income as a main source of income than female elderly.

Appendix I analyses the survey results of elderly employment from the Labour Force Survey 2013 which corresponds to the findings in NSSC 2011. The summaries of findings are:

- Labour force participation has increased amongst the elderly, though there is a limit in increase for those aged 70 and above.
- Labour force participation is higher amongst the male elderly compared to the female elderly across all age groups.
- The higher educated elderly have a higher median wage compared to the lower educated elderly.
- Median salary is lower for those 70 and above.
- Median gross salary for elderly males is higher than female elderly across education qualifications and age groups.

Thus the impact from employment income will be varied across gender and age groups with further differences based on the elderly's characteristics such as education level. However, considering the lower level of education amongst the elderly population, it is likely that the level of employment income that they receive will be in the lower ranges.

2) Elderly expenditure

Table 2: Top 5 main expenditure items by gender and age in Singapore, 2011 and 2005 (%)

Source: National Survey of Senior Citizens 2011, MSF

	Total		**Gender (2011)**		**Age group (2011)**		
	2005	**2011**	**Male**	**Female**	**55-64**	**65-74**	**75 and above**
1st	Food (88.8)	Food (96.7)	Food (96.7)	Food (96.7)	Food (97.3)	Food (97.1)	Food (93.8)
2nd	Transport (74.2)	Utilities (76.3)	Utilities (79.6)	Utilities (73.4)	Utilities (77.9)	Utilities (74.7)	Utilities (73.0)
3rd	Healthcare (49.4)	Transport (69.1)	Transport (68.2)	Transport (69.9)	Transport (69.1)	Transport (72.8)	Healthcare (65.7)
4th	Recreation (44.0)	Healthcare (58.3)	Healthcare (54.9)	Healthcare (61.3)	Healthcare (53.9)	Healthcare (63.1)	Transport (63.0)
5th	Utilities (44.0	Recreation (21.3)	Recreation (23.4)	Clothing (21.3)	Recreation (22.1)	Recreation (22.0)	Recreation (17.5)

Examining expenditure items of the elderly, we again refer to the NSSC 2011. Looking at main expenditure items (Table 2), comparing 2011 with 2005, Food remains the main expenditure item for the elderly. Utilities moved up from 5th in 2005 to 2nd in 2011 with Transport, Healthcare and Recreation expenses making up the rest of the top 5 expenditure items in 2011. Comparing by gender, the top 5 expenditures are largely similar other than Clothing expenses factoring higher for female elderly compared to Recreation. Comparing across age groups, we

see an increasing importance of Healthcare expenditure as we move up the older age groups. This reflects the higher incidence of illness as one ages, thus spending more on Healthcare.

3) Old age income adequacy

Looking at data in HES12/13 on the average monthly income and expenditure of households with household head aged 65 and above (Table 3), on average the households have a higher income ($7,884) than expenditure ($3,721), suggesting that on average there is income adequacy for these households. Those with children in the households (co-residence) are also better off than those without children (non co-residence), showing the positive impact in income adequacy of co-residence of elderly with their children. However, for those in the lowest quintile, regardless of whether there are children in the household, expenditure exceeds income by an average of $405 per month, suggesting that they do not have adequate income.

Table 3: Average Monthly Household Income and Expenditure by Household Living Arrangement and Income Quintile in Singapore (Household head aged 65 and above)

Source: National Survey of Senior Citizens 2011, MSF

	Total	1st - 20th	21st - 40th	41st - 60th	61st - 80th	81st - 100th
Income						
All	7,884	1,475	4,495	7,949	12,429	29,665
No Children in Household	3,646	1,143	2,903	5,184	7,721	21,452
With Children	11,919	2,442	5,915	8,897	14,170	32,726
Expenditure						
All	3,721	1,880	3,042	3,766	5,209	9,168
No Children in Household	2,332	1,629	2,108	2,902	4,397	6,166
With Children	5,043	2,609	3,876	4,062	5,510	10,286
Income – Expenditure						
All	4,163	**-405**	1,453	4,183	7,220	20,497
No Children in Household	1,314	**-486**	795	2,282	3,324	15,286
With Children	6,876	**-167**	2,039	4,835	8,660	22,440

Income data include employer CPF contributions
Expenditure data exclude imputed rental of owner-occupied accommodation
Based on ranking of all resident households by their monthly household income from all sources (including employer CPF contributions) per household member

In our further analysis based on data from HES 12/13 of retiree households (Appendix II) which are defined as those households comprising solely non-working persons aged 60 years and over, we find that expenditure exceeds income for most HDB retiree households in Singapore.

4) Old age income adequacy for selected groups:

i) Family support

Considering the high importance of income transfers for elderly income, those with no family support will be lacking in an important source of income which greatly affect their old age income adequacy. These include those who are single, widowed or childless. This is reflected in the lower net income after accounting for expenditure for elderly households with no children residing with them. HDB retiree households which make up the majority of retiree households further show the difference that co-residence can make in the income of the elderly.

ii) Gender differences

Considering the difference in labour force participation of female versus males, with a funded pension system like CPF, female elderly are likely to have lower CPF savings than male elderly. This is worsened by the longer life expectancy of females which means that whatever private savings or CPF savings will need to last a longer period of time. This makes them even more reliant on children transfers as earlier highlighted. Female elderly also place a higher emphasis on healthcare costs due to their longer life expectancy. As such, any increase in health expenses will affect them more greatly.

iii) Age difference

The impact of age difference is seen in the falling employment income for the older elderly. This makes them more reliant on family transfers and their own private savings. They are also especially sensitive to healthcare costs.

SOUTH KOREA

Elderly households examined in the following analysis refer to families of a single member or a couple aged over 59 years old (excluding 59 years old). By comparing household income sources and consumption expenditures, elderly household income adequacy will be outlined. The analysis will be based mainly on information released by Korean Statistical Information Service (KOSIS).

1) Elderly income

Family Support

Private transfers play an important role in South Korea, yet industrialization and urbanization have to some extent led to the erosion of traditional Confusions values, which could be reflected in two aspects: less co-residence with children and reduced financial assistance from children[18]. In addition, increasing participation of women and decreasing family size in general are another two contributing factors to declining support to elders from their offspring.

[18]Lee and Philips (2011)

Concerning financial assistance, the percentage of South Koreans aged over 59 who reported family transfers as their main source of income has dropped from 76 in 1980 to 31 in 2003[19]. It is reported that three decades ago, financial transfer from children contributed to more than 70% to the elderly people's total income in South Korea, which had dropped down to 31% in 2003[20]. Currently, 46.2% of South Korean elderly people are self-reliant financially without receiving any support from families while only 19% and 20% of them receive financial support from non-co-residing children and from co-residing children respectively[21]. According another report titled "A Return to Poverty—Income and Consumption of Korea's Elderly" by Ryn Sang-yun from LG Economic Research Institute, in South Korea, support from children accounted for 54.8% of the elderly income in 1990, but fell to 30.1% in 2010. Many scholars believe that such decline in family support before other private and public sources of old-age income mature in South Korea is the major culprit of rocketing suicide of elderly in South Korea.

In addition, there has seen more elders living alone, from 0.54 million in 2000 to 1.25 million in 2010[22], also indicating declining family support. Among elderly who have children, there are only 31.8% of the elders (over 60 years old) co-residing with their children, which would naturally lead to less in-house transfer[23]. Roughly estimated, individual income monthly for Korean elders appears to be 100, 000 Won less for those living alone than elders co-residing with children.

Table 4: Monthly average income based on household type in South Korea
Source: 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey, and authors' own calculation

10000 Won	Monthly average income	Estimated average individual income
Living alone	56	56
Living in couple	125	62.5
Living with children	264	66
Others	160	N/A

Public Transfers

The first public pension scheme introduced in South Korea was the Government Employees Pension, which was expanded to include the Military Personnel Pension, Private School Teacher's Pension and the Specially Designated Post Office Personnel Pension later, followed by

[19]Ibid.
[20]Cook and Kim (2010)
[21] National Human Rights Commission of Korea
[22] Jones and Urasawa (2014)
[23] 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey (2008년도노인실태조사 - 전국 노인생활실태 및 복지욕구조사)

the National Pension Scheme (NPS) enacted in 1988. By 2010, 19.1 million South Korean citizens were enrolled in the NPS with 2.3 million old-age pension benefits recipients[24].

Table 5: South Korea's pension system

	Pillar	Scheme	Participation	Contributions
Public pension	1	National Pension	Mandatory	20 years of contribution to be eligible
	1	Public Occupational Pensions	Mandatory	
Private pension	2	Retirement Pension	Mandatory	Employer
	3	Individual Pension	Voluntary	Individual
	0	Basic Old-age Pension	Residuary	Government funding
	0	National Basic Livelihood Security	Residuary	Government funding

After the second pension reform in 2007, South Korea's current pension system is characterized as a multi-pillar system, under which the old-age income is supported by public pension and private pension. According to the World Bank's conceptual framework, there are five pillars in a society's pension system. In South Korea's case, first, on the zero pillar (the pillar funded by taxes and targeted at those missed by the universal pension through means testing), the Basic Old-age Pension (BOAP) and National Basic Living Security Scheme (NBLS) are targeted mainly at low-income households; Then, the first pillar (the pillar with mandatory enrollment) is the public pension pillar consisting of National Pension (NP) and Public Occupational Pensions (POP), where both NP and POP are funded system; Next, Retirement Pension (RP) on the second pillar (private pension with mandatory enrollment funded by financial assets) and the Individual Pension (IP) on the third pillar (voluntary private pensions) belong to the private pension category.

For the majority of South Korea's elderly people, National Pension, National Basic Livelihood Security and the Basic Old-age Pension are the three main schemes as income sources. In addition to providing income support for the low-income elderly, job creation and retention programs as well as improving community services are the other two major strategies by the South Korean government to reduce elderly poverty.

Nevertheless, the coverage of these schemes on old-age South Koreans are reported to be relatively narrow, resulting in many doubts on the actual impact of the system. It is reported that only 29% of the elderly population received old-age pensions from the NPS in 2012[25].

[24]Lee and Philips (2010)
[25] Jones and Urasawa (2014)

Figure 8: Monthly government transfer and pension expenses in South Korea
Source: Statistics Korea and own calculations

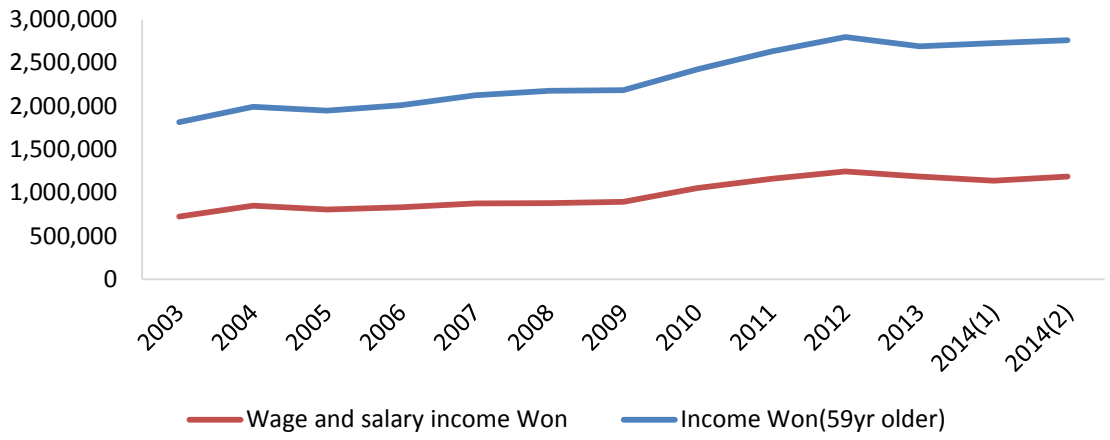
Under this national welfare system, government transfer to old people in South Korea (60 years or older) has increased significantly for the past decade by over 70%[26] since 2003, but much smaller than the increase of over 100%[27] for the society as a whole although the increase appeared to be greater for old age group in absolute term. And quite contrary to this, average monthly expenditure on pension for old age South Korean households has gone up by almost 50% and this number for the whole South Korean society is much higher at more than 80% from 2003 to 2013, which in some way indicates that elderly people in South Korea have received more from the government at less expenses in recent years. Although transfers from the government to elders in South Korea seemed to have increased in numbers historically, it actually only makes up less than 20% of the elderly total income, compared with OECD average of 59% in recent years[28].

Working Salary and Wage

For elderly South Korean who are 60 years old or above, both their total household income and their wage/salary income have increased in nominal term from 2003 to the second quarter of 2014, but not by much as illustrated in Figure 9, with their wage/salary income taking a quite stable share of the total income in the household at 40% to 42% over the years.

Figure 9: Income of households with household head over 59 years old in South Korea

[26] Data from Korean Statistical Information Service (KOSIS) and own calculation
[27] Ibid.
[28] Jones and Urasawa (2014)



Compared with the whole society, it is obvious that elderly households in South Korea are earning much less than the average level with this gap enlarging year by year as illustrated in Figure 10, while their wage and salary income actually take a smaller share of their total income compared to the society average whose wage and salary income occupy more than 60% of their total income. This would be partly explained by the relatively inactive status of elderly people in the economy because the participation rate in the economy for the whole society in South Korea has been quite stable at 61%, more than 20% higher than that for elderly South Korean who age 60 or older since 2000.

Figure 10: Household income: average and over 59 years old in South Korea

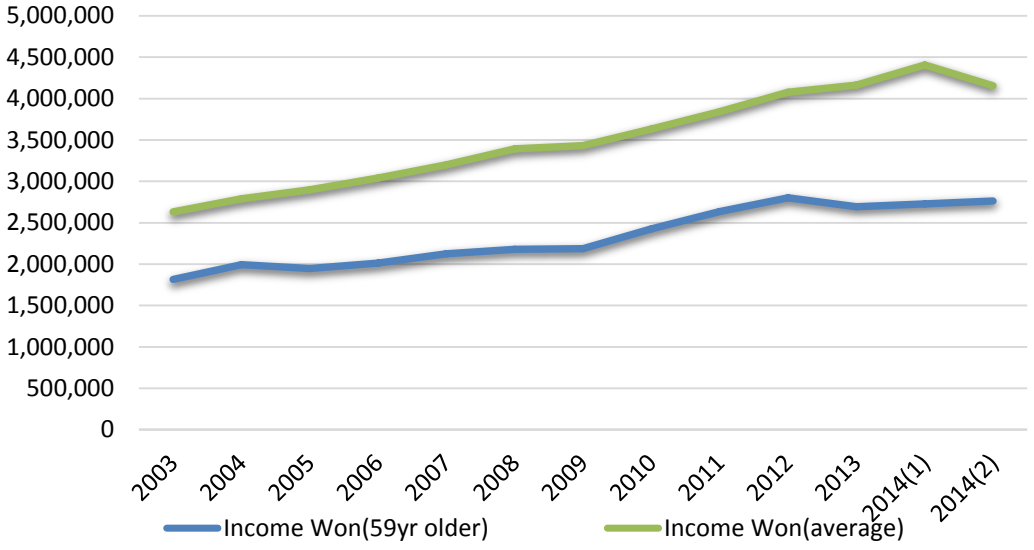
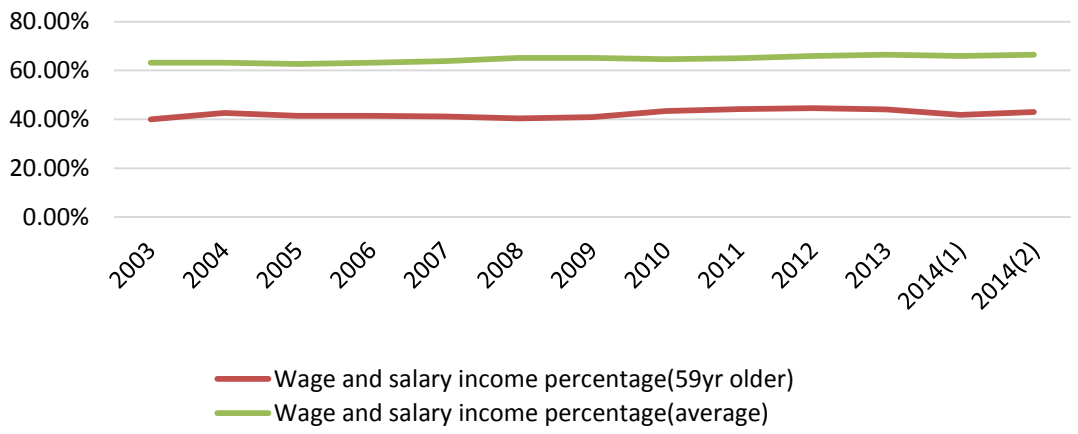


Figure 11: Wage income percentage: average and over 59 years old in South Korea

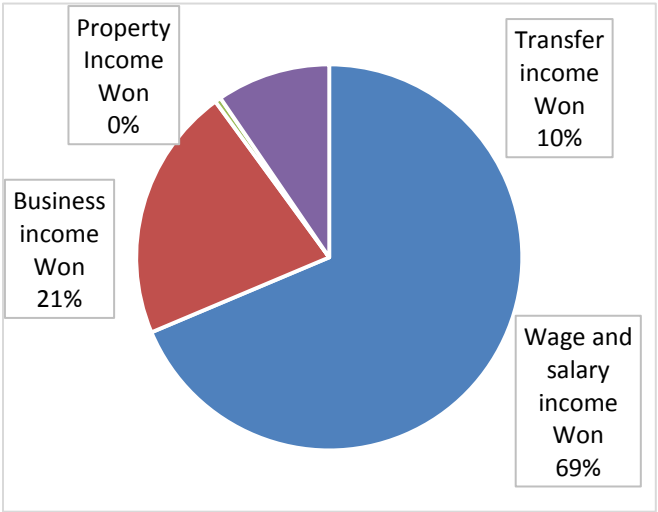


Property Income

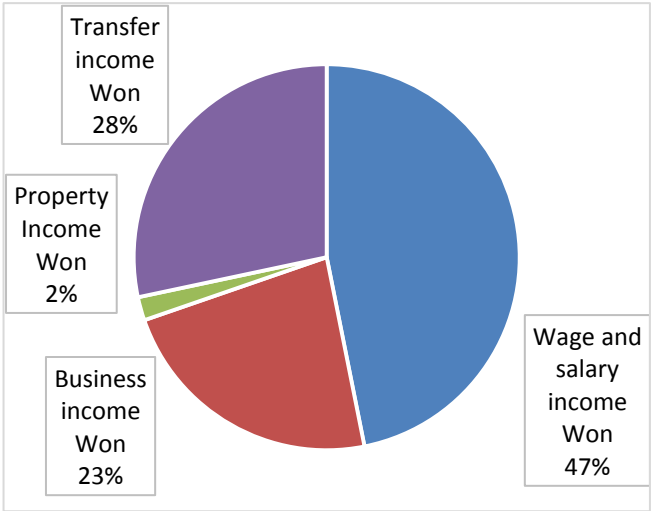
It would be interesting to see that asset is more important to elderly people's income than the society average when property income takes up 2% of the total household income for South Koreans older than 59, much more significant than the nearly 0% as the society average in 2013[29]. However on the other hand, it should also be noted that average household asset possession of real estate for elderly people (22,060 won) is only slightly above average (25,773 won), which would be interpreted as the heavier reliance on property income for elderly people in South Korea than average.

Figure 12: Income composition for all households versus for households over 59 years old in South Korea

For all households



For households over 59 years old



2) Elderly Expenditure

[29]Ibid.

The total nominal expenditure for South Korean elderly has increased gradually over the past decade mainly because of the increase in the nominal consumption expenditure given that non-consumption expenditures (tax, interest cost, charity donation, etc.) remained quite stable.

Figure 13: Total nominal expenditure of elderly household over 59 years old in South Korea

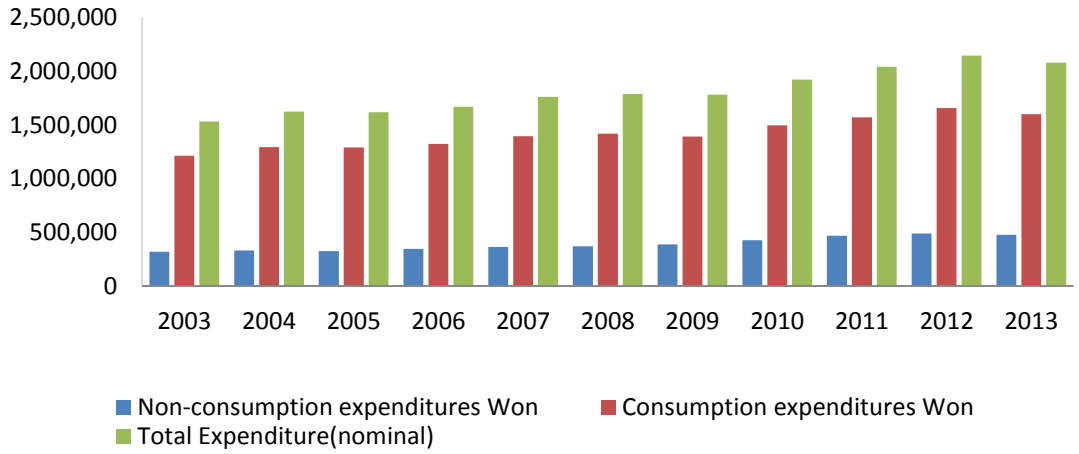
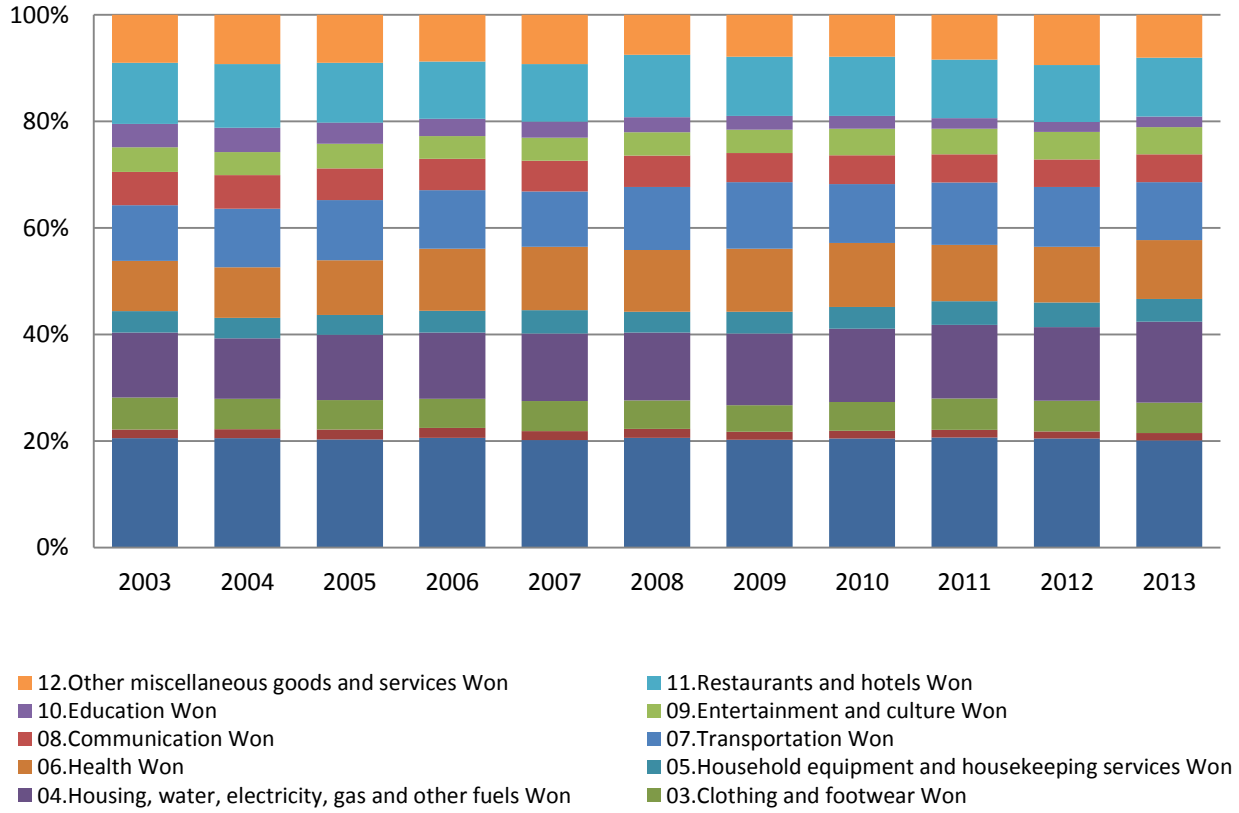


Figure 14: Components of consumption expenditures for elderly households in South Korea

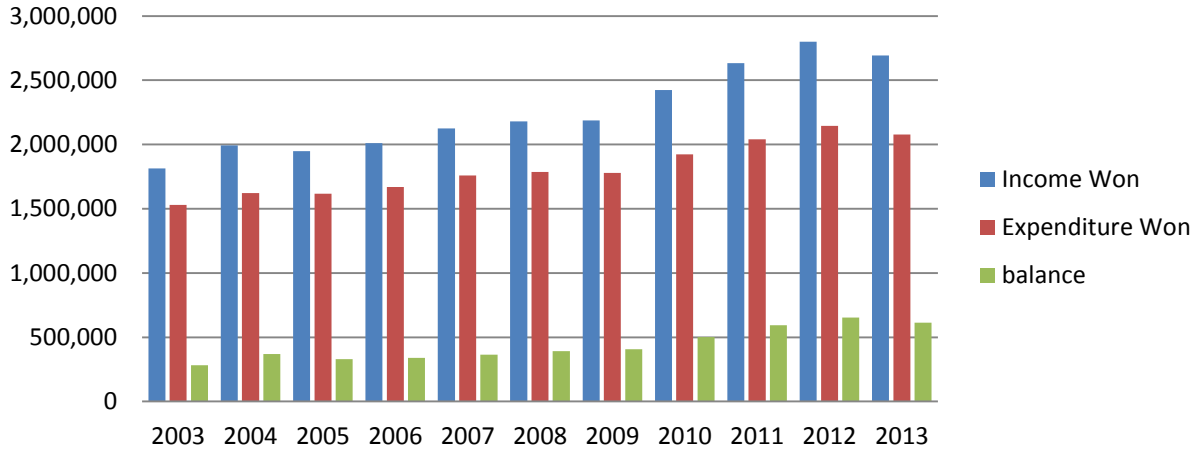


In our data, housing is documented together with expenses on fuels (electricity, water, gas, etc.), therefore there is no way to look at the consumption of only housing by the South Korean elders. Nevertheless, the proportion of this category has seen increase in all the expenses over the past decade from 12% to 15% while share of education expenditure has declined (from 4.3% down to 1.9%). Besides, it is noticeable that expenditures on health care were also increasing from 9% to 11% over the past ten years. However, the overall consumption basket for Elderly South Koreans aged over 59 years old has remained quite stable and unchanged.

3) Old age income adequacy

Comparing income with expenditure, it can be seen that economic situation is much tighter for elderly people in South Korea than the average, as illustrated in the graph below. As could be seen in the graph below, the balance of income-expenditure for South Korean elderly households has always been positive and the balance is also growing gradually from 2003 to 2013, which means that net income in nominal terms for elderly households in South Korea is actually on the increase, although at an extremely slow pace.

Figure 15: Income-expenditure for elderly households in South Korea

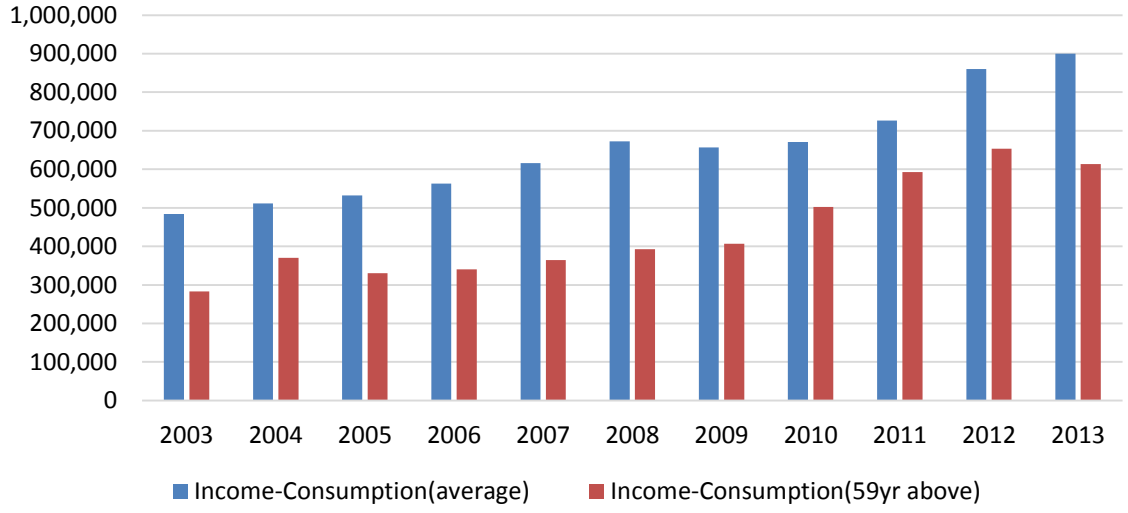


Nevertheless, when looking at the whole society in South Korea, net income for elders is obviously much lower than the average level, which is illustrated in the graph below, especially during the financial crisis when the disparity between elderly households and social average expanded. According to another survey, the majority of the South Korean elderly households (at 35.6%) have monthly balance between 0 and 500,000 won per month[30].

[30] 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey (2008 년도노인실태조사 - 전국 노인생활실태 및 복지욕구조사)

Although absolute difference between income and expenditure among elders in general is positive, relative poverty in South Korea has become a growing concern with the poverty rate of the elderly tripling that of the Korean total population[31].

Figure 16: Income-expenditure comparison in South Korea



4) Old age income Adequacy for selected groups:

i) Gender difference

In South Korea, income situation is much worse for female elders than their male counterparts. In the case of individual comparisons, Korean male elders receive an average of 1,081,000 Won monthly while females receive only 400, 000 Won, which is less than 50% of the male seniors. It is reported that the wage gender gap between female and male in South Korea appears to be the largest among OECD economies, with an average wage gap between permanent female and male workers at 38.9% in 2009[32]. It is not uncommon to see many cases in South Korea where females withdraw from the labor market after marriage, which, in addition to salary discrimination against females, contributes significantly to the poverty in their later stage of life. Also biologically speaking, females usually have a longer life expectancy than males, and in South Korea, the percentage of elders over 65 years old living alone is 28.9% for females but only 6.2% for males[33], leading to more vulnerability of income adequacy and life security for elder females in the country.

[31] Jones and Urasawa (2014)

[32] The Dong-A Ilbo, Korea has biggest gender wage gap among OECD nations

[33] 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey (2008 년도노인실태조사 - 전국 노인생활실태 및 복지욕구조사)

ii) Age difference

Looking at age, monthly income declines rapidly with the increase of one's age in South Korea: elders between 60 and 64 years old receive three times more than those above 85 years old. Especially when healthcare expenditure would go up naturally with age increase, senior citizens aged over 80 years are the most at-risk group. Interestingly, although the subjective satisfaction on how much elders feel the income they are receiving is enough to support their life declines with age in South Korea, elders between 80 and 84 years old have the least amount of satisfaction instead of those aged 85 years old or above[34].

Figure 17: Monthly average income across age groups (60 and above) in South Korea

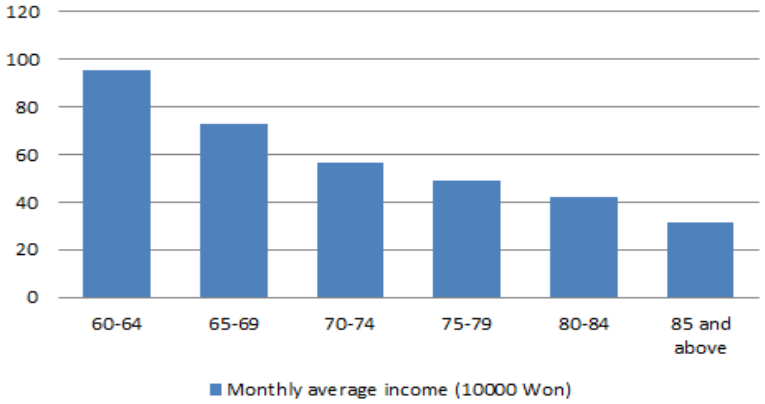
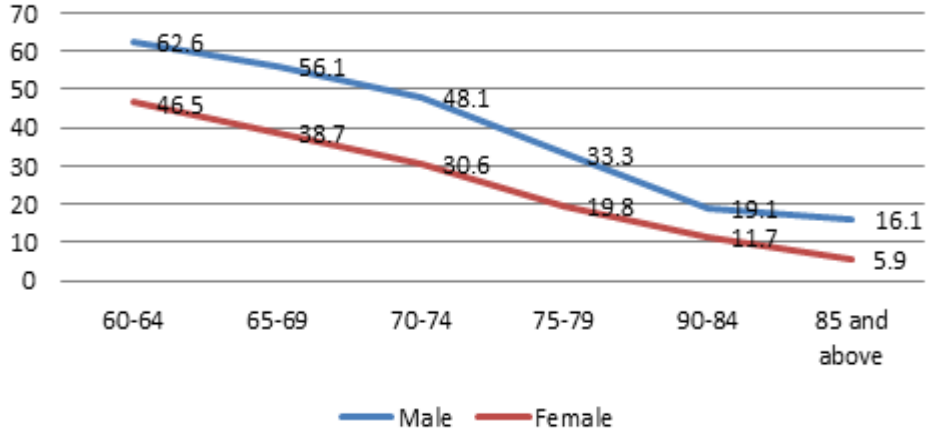


Figure 18: Chance of employment for elders currently unemployed in South Korea by gender (%)

Source: 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey



While wage and salary construct a key component of elder income in South Korea, female elders face the biggest challenges when they grow older because their chances of getting hired in the workplace drops very fast, as demonstrated in the graph below.

[34] Ibid.

iii) Residence difference

With family structure transforming rapidly in the modern Korean society, less co-residence with children would also put elders living by themselves at higher risk in terms of income adequacy. As could be seen in Table 6, elders living with their children could have a monthly positive balance at 200,000 Won, 120,000 Won more than those who live completely alone.

Table 6: Monthly average income and expenditure of elderly in South Korea

Source: 2008 Elders Status Survey—National Elderly Living Status and Welfare Desire Survey, and authors' own calculation

1000 Won	Monthly average income	Estimated average individual income	Monthly average expenditure	Estimated average individual expenditure	Individual balance
Living alone	56	56	47.9	47.9	**8.1**
Living in couple	125	62.5	99.6	49.8	**12.7**
Living with children	264	66	182.7	45.675	**20.325**
Others	160	N/A	121.7	N/A	N/A

COMAPARING OLD AGE INCOME ADEQUACY IN SINGAPORE AND SOUTH KOREA

Having examined the income and expenditure components of both countries, we find that Singaporean elderly continue to have high reliance on transfers from children whilst in South Korea, the reliance has been falling over the years.

In both countries, personal wealth of the elderly is important in supplementing their income, with Singaporeans elderly largely depending on savings while South Korean elderly being more dependent on property income. This suggests that there is gap for Singaporean elderly in monetizing the value of their properties. Employment income is increasingly important for elderly in both countries, though salaries of the elderly remain deflated and as the elderly age, its role becomes smaller.

With regards to the pension system, the data suggests that CPF savings play little role in the income adequacy of the elderly in Singapore. In comparison, South Korean elderly has a more comprehensive system pension system. However, due to the later establishment of the pension system, coverage remains narrow.

Furthermore, with the limited impact of government transfers in both countries, in terms of income sources, wealth income and transfers from children are the key factors determining the income level of elderly in Singapore and South Korea.

For expenditure items, South Korean elderly's expenditure basket remains largely stable with similar key items as Singaporean elderly with Food expenditure being the main expenditure items. However, two items that stand out is the increasing cost of utilities to elderly and healthcare costs that will play more prominently in the consumption basket of older elderly.

Considering the similarities in demography of both countries, the at-risk elderly in terms of old age income adequacy are female elderly, the older elderly and those lacking in family support. Hence, we will next look at the policies in place in both countries and whether they are able to improve old age income adequacy of elderly in the countries, especially of these at-risk groups.

c. Policy Comparison

To boost the income adequacy of elderly, policies can be in helping to raise the income level or to reduce the cost of consumption. In the next section, we will review what the policies in place in Singapore and South Korea are.

SINGAPORE

1) Summary of Singapore policies supporting old age income

To encourage the elderly to continue working past retirement age of 62, the Retirement and Re-employment Act replaced the Retirement Age Act effective on 1 January 2012.[35] It requires employers to offer re-employment to eligible employees who are able and willing when they turn 62 up to age 65. This will allow the elderly to work longer and be able to supplement their income through wage and salary for a longer period of time.

As earlier note, the CPF system is an important pillar to Singapore's pension system. As a funded system, the amount of savings is dependent on the member's contributions over his/her working life and income level. Drawdowns from the CPF savings will begin from ages 62 to 65 onwards through the Minimum Sum Scheme. Changes have been made to the CPF system over the years to help improve old age income adequacy of elderly in Singapore. Initiatives include:

i. ***Increasing CPF contribution rate over the years for those aged 50 and above*** in September 2012 and again in January 2015. The increase in contributions would then be paid into the various accounts, with a higher percentage allocated to the Special account to help members save for their retirement. However, due to the lower proportion of older

[35] Ministry of Manpower, Retirement and Re-employment Act

elderly who are employed and their lower median salary, the main beneficiaries will be the younger elderly.

ii. ***Higher interest rate for Special, Retirement and Medisave accounts*** which as of 1 January 2015 is 4%. Furthermore, an additional 1% interest is paid on the first $60,000 of a member's combined balances. If a member is above 55 years old and participates in the CPF LIFE scheme, the additional 1% interest will still be earned on his combined balances, which includes the savings used for CPF LIFE.

iii. ***CPF Life[36] which is an annuity program*** that the CPF members who are 55 years or older in 2009 can choose to join any time before they are aged 80. Otherwise, retirees can choose to remain on the ***Minimum Sum scheme*** of which they will draw down their CPF savings over a period of 20 years from age 62 to 65 onwards depending on their qualifying age.

Table 7: Change in CPF Contribution rates for older workers effective 1 January 2015
Source: Central Provident Fund

Employee Age (Years)	**Increase in contribution rates (% of wages)**		
	Contribution by employer	**Contribution by employee**	**Total**
Above 50 – 55	+ 1	+ 0.5	+ 1.5
Above 55 – 60	+ 0.5	-	+ 0.5
Above 60 – 65	+ 0.5	-	+ 0.5

Table 8: CPF Contribution rates as of 1 January 2015
Source: Central Provident Fund

Employee's Age (Years)	**Contribution Rate** ***(for monthly wages ≥ $750)***			**Credited to**		
	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)
Above 55-60	12	13	25	12	2.5	10.5
Above 60-65	8.5	7.5	16	3.5	2	10.5
Above 65	7.5	5	12.5	1	1	10.5

As earlier mentioned, the Singapore government continues to put emphasis on family support in the care of the elderly. To encourage children's support and co-residence in Singapore, higher tax relief is provided for children who stay with and support their parents.[37] Children also qualify

[36] Central Provident Fund, Introduction to CPF Life
[37] Inland Revenue Authority of Singapore, Parent/handicapped parent relief.

for further tax relief when they top up the CPF savings of their parents.[38] Families also qualify for the Foreign Domestic Worker (FDW) Grant of $120 per month if they hire foreign domestic workers to help take care of the elderly.

In cases where children are able and yet unwilling to support their parents, elderly aged 60 and above who are unable to support themselves can use the Family Maintenance Act to sue their children for maintenance, in the form of monthly allowances or a lump-sum payment. The number of applications fell from 84 cases in 2012 to 63 in 2013[39]. 90% of the rulings are below $600, with an average amount of $300.[40]

To help elderly monetize the asset value of their housing, the Silver Housing Bonus (SHB) and Enhanced Lease Buyback scheme (LBS) were implemented. SHB help lower-income elderly to increase their retirement income through downgrading to a smaller flat type through which they can receive up to $20,000 cash bonus per household by using some of the net sale proceeds to top up their CPF Retirement Account and join CPF LIFE.[41] LBS help low-income elderly households in 4-room and smaller flats to unlock part of their housing equity while continue living in their homes, and receiving a lifelong income stream to supplement their retirement income by retaining a 30-year lease on their flat. Proceeds from selling part of the flat lease will be used to top up their CPF Retirement Accounts and purchase a CPF LIFE plan to give them a monthly income for life.[42]

Government social support is seen as a last resort through the ComCare fund with cash assistance based on household size (Table 9).[43] Eligible people for the ComCare Long Term Assistance are those who are:

- unable to work due to old age, illness or unfavourable family circumstances
- have no means of stable income
- are elderly persons who receive only a small monthly payout from CPF Minimum Sum/ CPF Life, Pension, Eldershield, Lease Buyback Scheme, and the monthly payout is lower than the prevailing public assistance rates
- are elderly persons whose children are low income themselves and unable to support their parents. The children must be supporting their own families and each have household income of $1,700 or below
- are a Singapore Citizen or a Permanent Resident

[38] Central Provident Fund, CPF Minimum Sum Topping-Up Scheme
[39] Ministry of Social and Family Development, Singapore Social Statistics in Brief 2014
[40] My Paper, Maintenance fee for parents average $300
[41] Housing Development Board, Overview: Right-sizing with SHB
[42] Housing Development Board, Overview: Enhanced Lease Buyback Scheme
[43] Ministry of Social and Family Development, Public Assistance

Table 9: Cash Assistance from ComCare Long Term Assistance in Singapore (from April 2013)

Source: Ministry of Social and Family Development

Household Type	Cash Assistance per household	Cash Assistance per household member
1 Person	$450	$450
2 Persons	$790	$395
3 Persons	$990	$330
4 Persons	$1180	$295

2) Summary of Singapore policies to help reduce cost of elderly expenditure

Programs to help reduce cost of elderly in their expenditure concentrates on transport and healthcare costs. Senior citizens aged 60 and above pay a reduced transport fare of maximum $0.94 cents compared to the adult fare maximum of $2.27.[44] Even with the fare increase in 5 April 2015, there is no change for senior citizens.[45]

To help elderly manage health costs, the Pioneer Generation (PG) Card was issued to those 65 years or older in 2014 and became a Singapore citizen on or before 31 December 1986. An estimated 450,000 Singaporean elderly will benefit from the PG package. The benefits include:

- Subsidy at general practitioner clinics, polyclinics and specialist care clinics at public hospitals
- Subsidy for visits for selected chronic conditions with a cap of $360 per year for a single chronic condition and $540 per year for multiple chronic conditions
- Extra 50% off subsidized medications
- Medishield Life insurance subsidy (50% for those aged 65 to 79 and full subsidy for those aged 80 and above)
- Annual Medisave Top-Ups from 1 July 2014 ranging from $200 to $800 depending on age group.
- Pioneer Generation Disability Assistance Scheme of $100 per month for those who permanently need assistance in at least 3 of the listed activities of daily living

For those who need further assistance, they can apply for secondary assistance such as those with recurring health consumables and discretional assistance under the ComCare fund.

3) Evaluation of Singapore policies

The assessment of the existing policies in Singapore relating to old age income adequacy is summarized in Table 10.

[44] TransitLink, Senior Citizens Fares

[45] Public Transport Council, No fare increase for more than 1.1 million commuters

Table 10: Assessment of Singapore policies

Criteria:	Strengths	Weakness
Policies targeting income:		
Increasing re-employment age	- Additional income - Delay usage of savings and CPF savings	- Difficulty of unemployed elderly to get employment
CPF Scheme	- Sustainable system	- Dependent on individual's income level - Only those who have worked substantially
CPF Scheme Revisions:		
Increasing CPF Contribution rate	- Allow for higher amount to be saved for retirement	- Benefit mainly those who are in higher income group
Higher interest rate	- Allow for higher returns for CPF savings	- Benefit mainly those who have amounts up to $60,000
CPF Life	- Help the elderly to receive annuity payments for a longer period of time	- Benefit mainly those who have sufficient amount
Encouraging Family Support:		
Tax relief & FDW relief	- Help families to receive help for their support of elderly parents	- Benefit mainly Middle income and above families which pay income tax and/or able to employ FDW
Family Maintenance Act	- Allow elderly to have legal means to seek maintenance from family	- Low pay-out sum - Few cases sought
Silver Housing Bonus	- Allow elderly to monetise their housing asset	- Elderly seek to keep asset as a bequest - Those without housing asset unable to benefit
Lease Buyback scheme	- Allow elderly to monetise their housing asset	- Elderly seek to keep asset as a bequest - Those without housing asset unable to benefit
Long Term Assistance Scheme	- Targeted to help those who are poor and in need	- Means-testing system complex
Policies targeting expenditure:		
Public transport subsidy	- Universal eligibility - Simple to use	
Pioneer Generation Package	- Universal eligibility - Simple to use	- Only those aged 65 and above as of 2014 can benefit

As such, revisions to the CPF system relating to increasing CPF contribution amount and higher interest rate will favour those of higher income group who have higher CPF savings. For example, for the higher interest rate, those who are able to benefit fully will be those who have at least $60,000 in their CPF savings. Looking at CPF 2013 data[46], for those aged 60 and above active account holders, over a third have less than $60,000 in their accounts based on regressed balances[47]. As such, the number of elderly with less than $60,000 in the accounts will be more. Again, how the elderly are able to benefit from the CPF Life Scheme is dependent on how much CPF savings they were able to accumulate.

For the policies encouraging family support, while helping families which support the elderly in the family, the method of support through tax relief and FDW relief means that it is usually families of higher income groups which are able to benefit from these reliefs. Hence, as we had seen earlier, those in the lowest quintile households are those that have old age income inadequacy and these schemes will not be effective for them.

With regards to the Family Maintenance Act, as a law, it provides elderly the legal right to pursue maintenance from their children. However, with the decreasing number of cases brought forward and the average award amount lower than the long term assistance scheme, elderly might choose to apply for public assistance instead of bringing their children to court. Hence, its ability to provide the security for elderly to seek support seems limited.

The ability of SHB and LBS to supplement old age income through housing asset monetization is limited in effectiveness due to the stickiness of the concept of holding the housing as an asset and as a bequest for the next generation. In addition, for those who are in lower income families with smaller houses or older estates, they are limited in their choices to downgrade. Furthermore, the lower income elderly may also not own any housing asset so as to be able to benefit from the scheme.

Thus, the long term assistance scheme acts as a last support, helping to provide direct income assistance to improve income levels of poor elderly in Singapore as they are those who need help most. However, the complex means-testing criteria to qualify for public assistance make it difficult for elderly to know about the scheme and how to apply for them. This means that the government instead has to rely heavily on outreach programs through social workers and other non-governmental agencies to assist these elderly.

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[46] CPF 2013 Summary data

[47] Regrossed balances include amounts withdrawn under Investment, Education, Residential Properties, Non-Residential Properties and Public Housing Schemes as at end of period.
http://mycpf.cpf.gov.sg/NR/rdonlyres/2E30254F-5B92-48F2-B554-D1430B13B01D/0/CPFTrends_CompositionofCPFBalances.pdf

In comparison, policies targeting expenditure are universal in nature, with age as the only criterion. This makes it easy for elderly to understand and benefit from the scheme. With transport and healthcare expenditure amongst the top five main expense items of elderly, any control in costs in these areas will help elderly in their old age income adequacy. Moreover, as the subsidy are skewed towards public services that the poor elderly will tend to use more, i.e. public transport versus private transport, public healthcare versus private healthcare, the subsidy will be enjoyed more by poor elderly. However, as the Pioneer Generation package is only limited to those aged 65 and above as of 2014, it means that younger elderly who do not meet the criterion will not be able to benefit from the subsidy in health costs.

Helping at-risk elderly groups

With regards to gender, age and family support differences, the listed policies being generic, do not do much differentiation for these at-risk groups.

Female elderly are likely to benefit more from the Pioneer Generation package due to healthcare costs factoring higher for them. However, considering their shorter working period compared to males, they will have lower CPF savings and would not benefit much from the CPF changes. Similarly, changes in re-employment age would not benefit most females due to their lower workforce participation rate.

Older elderly too will mainly benefit from the Pioneer Generation package. However, similar as female elderly, with lower workforce participation rate and the drawdown of their CPF savings already, they will not benefit much from changes regarding employment and CPF. For elderly who do not have family support, they would need to rely on the long term assistance scheme as a last resort, though as mentioned, the means-testing required will be challenging for them.

SOUTH KOREA

1) Summary of South Korea policies supporting old age income

Similar to Singapore, South Korea is increasing effort to raise the retirement age. The current retirement age for Korean staff is 60, while an amendment to an existing law that increases the minimum normal retirement age to 60 was passed on April 30, 2013. [48] In response to the pressure from aging society, the National Assembly of Korea enacted a law that would guarantee workers the right to retire at the age of 60 beginning from January 2016 for enterprises and public institutes with more than 300 employees, and from January 2017 for others.

The main pillars of old age income security system in South Korea have taken shape in the last two decades after three reforms. The structure of the pension system can be broadly classified into two types: mandatory occupational pension (including retirement pension plans and

[48] Chang, Preparing for retirement in Korea (2013)

retirement pay schemes) and voluntary public pension (mainly refers to National Pension System).

i) National Pension Service (NPS)

The NPS is a partially funded, defined benefit Plan (DBP) system covering 53% of the labour force. Groups that are excluded from the system are low-income people, temporary and daily workers as well as self-employed workers who do not declare income. Employers and employees contribute 4.5% of wages respectively. The benefit formula consists of basic and earnings-related portions. The system is progressive and applies an average accrual rate of 1.5% over a 40-year contribution period. Benefits are paid mainly in the form of annuity, which is indexed to prices, with the full pension available at age 60. The retirement age will rise to 65 by 2033.

b. The Retirement Pension / The severance pay system

Until recently, the severance pay system was the main pension scheme for private sector employees, and it is mandatory for companies with five or more employees. Employees are entitled to severance pay after one year of continuous employment. Companies running severance pay schemes may qualify for tax benefits of up to 30% in the case of internal reserves and 100% in the case of external funding. Investment income is tax-exempt, while benefits are taxed. The government has announced plans to require companies with 300 or more employees to provide company pension plans beginning in 2016. The mandate would be gradually extended to smaller employers by 2022.

iii) The Basic Old-age pension

The Basic Old-age Pension is designed to enhance the elderly welfare by providing a monthly pension payment to the elderly in need. It will support the healthy and stable old life especially when the National Pension System remains premature for a wide range of coverage. Age 60 or older (to be raised gradually to age 65 from 2011 to 2033) with at least 20 years of coverage. If younger than age 65, taxable monthly income or earnings from gainful activity must not exceed 1,791,955 won. With 20 years of coverage, the basic monthly pension amount (BPA) is 1.5 (decreasing by 0.015 a year from 2008 to 2027 until reaching 1.2 in 2028) times the sum of the average indexed national monthly wage in the 3 years immediately before the year in which the pension is first paid and the insured's average monthly wage over the insured's total contribution period. An increment is paid for each year of coverage exceeding 20 years.

iv) The Public Assistance Scheme

The public assistance scheme targets at the elderly who are excluded from National Pension Scheme due to upper age limit. This scheme provides pensions for the low-income people aged over 65. As of 2004, 618,531 receive pension benefits ranging from 30,630 KW to 50,000 KW per month based on his/her income level and age. [49]

[49] ILO Social Security Department

Table11: The multi-pillar system in South Korea

Source: Kim, 2014

Pillar	Life-time poor	Informal Sector	Formal Sector	Characteristics	Participation	Funding
0	X	X	X	Basic Old-Age Pension (2008); National Basic Living Security Scheme (2000)	Quasi-universal residuary	Governments' general funding
1			X	National Pension Scheme (NPS) and Special Public Pension Scheme (SPPS)	Mandatory	Contributions
2			X	Legal Retirement Payment Scheme and Retirement Mandatory Pension	Mandatory	Employer contributions
3		X	X	Individual Pension Scheme	Voluntary	Individual contributions
4	X	X	X	Private transfer, savings or asset	Voluntary	Family transfer/personal assets

2) Summary of South Korea policies to help reduce cost of elderly expenditure

While South Korea has some policies covering elderly expenditure costs, the coverage is not universal.

i) Transportation allowance

There was a transport policy implemented in 1984 that allowed elderly aged 65 and above free public transportation. However, since 2005, free bus transport is no longer part but senior citizens are still entitled to free subway in six major cities (Seoul, Busan, Gwangju, Daegu, Daejeon and Incheon).

ii) Elderly Long-term care insurance

Since 2008, South Korea implemented the universal Long-Term care insurance, run by the Ministry of Health and Welfare and the National Health Insurance (NHI). It covers those who are under the NHI system and provides long-term care benefits to those aged 65 and above who have difficulty taking care of themselves for a period of at least 6 months due to old age or geriatric disease. Depending on the level care grade required (Figure X), the insured can access to services provided with co-payment, with the poor paying reduced co-payments. Cash payment of

between US$700 to US$1000 is given only in exceptional cases where there are no care services nearby. Those relying on informal family caregiver are limited to claim US$150.[50]

Figure 19: Grading Criteria for LTCI in Korea

Source: Ministry of Health & Welfare, Korea

Grade Classification	Grading Criteria
Long-Term Care Grade 1	Persons who wholly need others´ help in their daily lives and record a long-term care acknowledgement score of at least 95
Long-Term Care Grade 2	Persons who have significant need for others´ help in their daily lives and record a long-term care acknowledgement score of at least 75 but less than 95
Long-Term Care Grade 3	Persons who have some need for others´ help in their daily lives and record a long-term care acknowledgement score of at least 55 but less than 75

	Care Grade 1 (most severe)	Care Grade 2 (severe)	Care Grade 3 (moderate)	No Grade (mild)
Status	• Suffering from a disease that renders the person bedridden because of inability to move by himself/herself • Wholly dependent on other people´s help in all daily activities including eating, using the toilet, and dressing/undressing	• Significantly dependent on other people´s help in all daily activities including eating, using the toilet, and dressing/undressing • Using wheelchairs in daily life • Generally staying in bed even during daytime	• Moving with walking aids, etc. • Possible to go out only with the help of others	• Generally independent in all daily activities including eating, using the toilet, and dressing/undressing, but remaining in need of assistance sometimes for such reasons as compromised ability to manage their life

3) Evaluation of South Korea policies

Table 12 : Evaluation of South Korea policies

Criteria:	Strengths	Weakness
Policies targeting at income:		
National Pension Service (NPS)	- Contain considerations for special cases of disruptions to contribution such as periods of unemployment, credits for women for childcare - Incentives for retirement deferral	- Low coverage rate (only around 35% are covered)
The Retirement Pension/The severance pay system	- Acts as additional payment for retirement	- Lack of portability - Coverage lacking as employees of companies

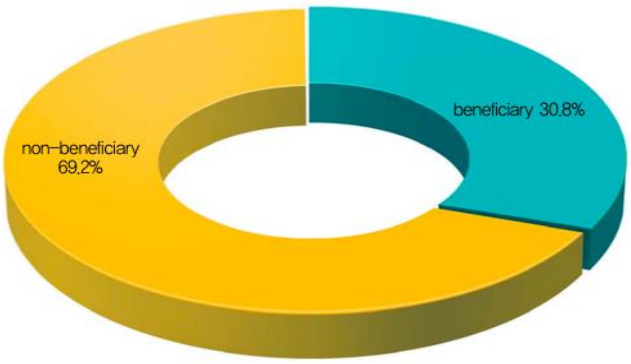
[50] Kim and Young (2013)

		with less than five are excluded - In case of employer's insolvency before retirement, benefits will be lost
The Basic Old-age pension	- Universal coverage for elderly aged 60 and above (to be raised gradually to age 65 from 2011 to 2033)	- Low payment amount - Need 20 years of working history
Public Assistance Scheme	- Groups that are excluded from NPS and are low income	- Low payment amount
Policies targeting at expenditure:		
Public transport subsidy	- Assist in transport costs	- Reducing benefits
Elderly Long-term care insurance	- Assist in healthcare costs	- Excludes those who are not covered under NHI

The South Korean pension scheme takes a multi-pillar approach to try to encompass as many elderly as possible in the scheme. For example, even with disruptions to employment period, NPS does not stop coverage for those who have contributed to it. Furthermore, the different layers provide multiple levels protection for the elderly in South Korea so that for an elderly who has worked 20 years and is in all the different programs, he/she will be able to receive the basic old-age pension as well as the NPS and retirement pension. Even for those who are not in the NPS scheme, the basic old age pension and the public assistance schemes come in to provide coverage for these elderly.

Figure 20: Beneficiary rate of public income security among those aged 65 and above in South Korea

Source: Social Index Survey 2007, Ministry for Health, Welfare & Family affairs



However, while the system is built to benefit as many elderly as possible, the complex requirements of the system mean that the coverage of the system is low. Many low-income self-employed and unemployed groups cannot access the national pension and only those who were first to apply to the scheme and made contributions continuously can benefit from the National Pension system. Figure 20 shows that in 2007, only 30% of elderly aged 65 and above are covered by NPS. Hence for female elderly who are unlikely to have 20 years of working history will not be by NPS, nor by the old age pension scheme. Hence, the female elderly will need to rely on the public assistance scheme if required.

The other weakness of the pension scheme is the generally low payment amounts. Due to the scheme's immaturity, the pay-as-you-go rate of national pension stood at only 3.0% in 2010, much lower than the present contribution rate of 9%. However, the number of beneficiaries is expected to climb exponentially after 2020 (Figure 20). As such, to cope with the increase, the pay-as-you-go rate will need to grow as fast, estimated to reach 21.9% to cope with the fasting aging society (Table 12). Hence the sustainability of the existing pension system is the major concern and the NPS fund is projected to exhaust in 2060 while there are currently no plans after the fund has depleted. The current contribution-benefit structure is thus not functional to guarantee intergenerational equity because the present generation receives greater benefits compared to their contributions payment. However, future generation may have to bear even heavier burden to cover the cost of the gain.

Figure 21: Projection of future National Pension Beneficiaries in South Korea

Source: National Pension Service

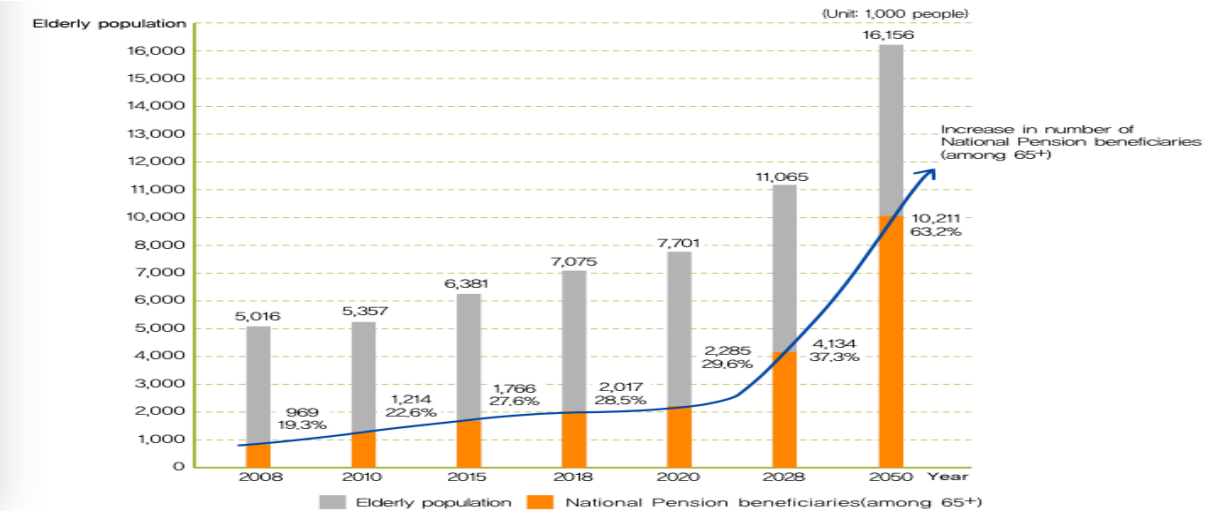


Table 13: Pay-as-you-go Rate of National Pension in South Korea (%)

2010	2020	2030	2040	2050	2060	2070	2078
3.0	4.9	8.2	13.1	17.7	21.9	23.2	22.9

Source: Committee of National Pension Financial Review (2008), Report of the 2nd National Pension Financial Review

South Korea's policies targeting expenditure items suffer from the same problem of coverage. For example, elderly who do not have access to subways will not be able to benefit the public transport subsidy and elderly not covered by the NHI will not be able to benefit from the long-term care insurance.

Helping at-risk elderly groups

The existing policy basket in South Korea also fails to cover some vulnerable groups. Evidence from previous analysis about the income adequacy for specific elderly groups indicates that elderly people characterized with females, advanced age and less co-residence are vulnerable. In addition, according to OECD report, the poverty rate of the Korean elderly aged 65 and above was 45.01%, which was the highest among all OECD countries. Facing the income inadequacy challenge, elderly Koreans tend to remain in the labour force far longer than their counterparts in the middle-income economies.

The phenomenon can be attributed to the following reasons: Firstly, current policies fail to make an assumption on future growth in life-span, fast changing age structure and transition in family structure, therefore did not apply the life-cycle approach to design a sustainable pension system., the elderly without adequate contribution careers cannot receive pension benefits. In the case of gender inequality, the average benefit for women was only 60% of that for men, reflecting their shorter contribution histories and concentration in non-regular employment where wages are relatively low.[51] Higher non-regular employment, as well as the lower female labor force participation rate, also results in a smaller share of women (at 36%) paying pension contributions than men (50%). The government also acknowledges that "policies to adequately provide women's pension rights are not still sufficient in Korea".[52]

Hence, while the South Korean government tries to reinforce the stability of the multi-pillar pension system by stabilizing the fundamental old-age pension, vitalizing private pension system and providing welfare package, the lack of coverage and poor benefits mean that South Korean still have to rely heavily on familial support as the primary means of support for old age income adequacy. Yet, South Korean elderly are losing support from their family and old-age poverty

[51] Kim (2011)
[52] Government of Korea (2013).

rate in South Korea is the highest compared with other OECD countries. Hence, the slow maturity, limited coverage, low take-up rates of the current elderly combined with rapid population aging pose as the biggest challenge towards the feasibility of existing policy system.

COMAPARING POLICIES IN SINGAPORE AND SOUTH KOREA

After looking at the various policies in Singapore and South Korea, we see that both countries have rather different policies to address old age income adequacy. Singapore has attempted to implement various policies to improve income and reduce expenditure, while leaving the pension system largely unchanged in structure. In comparison, South Korea has essentially rebuilt its pension system towards a pay-as-you-go system with few other supporting policies.

Thus returning to Martin's framework, we begin to see a difference in policies in Singapore and South Korea. Singapore's continued emphasis on family as the first line of support, together with self-sufficiency is embedded in the CPF system and the laws such as Family Maintenance Act to try to enforce family support. This has helped to arrest the fall in family support as family support remains high in importance in sources of income for elderly. However, the trend of changing family structure had not stopped in Singapore and instead elderly are expected to do self-support if family support is missing due to the mean-tested long term assistance scheme.

Figure 22: Interaction of ideals, law and practices in Singapore versus South Korea

In comparison, South Korea whilst still eschewing the Confucian heritage of family care, has seemingly accept falling family support and already started to move towards support from the state through a universal pension system. There is little emphasis on policies to encourage family support. However, as we have seen in South Korea's experience, the pension system reforms' effectiveness remains on shaky ground due to lack of coverage and immaturity of the system. Expenditure based policies also provide scant support due to limitations in coverage. We thus see a problem of feasibility in the long run and with the lack of other strong supporting policies, all the stress is towards old age income adequacy is on the pension system.

A similarity between both countries is that there are no specific policies directed at the at-risk groups of elderly and they remain vulnerable to changes to family structure in their old age income adequacy. The existing policies provide scant support for them, though some policies may benefit them more to their income and consumption trends.

Table 14: Comparison between Singapore and South Korea in policies

Singapore	South Korea
A policy mix	Concentrate on building pension system
Funded Pension System - Based on personal contributions - Skewed towards higher income	Pay-as-you-go system - Lack of coverage - Insufficient amount (immaturity)
Policy Ideology: - "Family as first line of support" - Policies to encourage family support - Hesitant response to family structure change	Policy Ideology - No policies directed at encouraging family support - Starting to respond to family structure change
At-risk groups remain vulnerable	At-risk groups remain vulnerable

VI) Policy Recommendations for Singapore

a. Lessons from South Korea's experience

Singapore policy directions remain largely focused on the family factor. However, changing family structure will hit especially for future generations of elderly. That is not withstanding that the current generation of elderly are already feeling the effects of changing family structure through more retiree households. Also, as earlier discussed the at-risk groups of female elderly, older elderly and those lacking family support, remain at risk despite the policies aimed at increasing old age income security for Singaporean elderly.

Hence, South Korea as an early mover towards trying to provide more in old age income adequacy provides lessons for Singapore on changes in policies that can be put in place. South Korea has shown the importance of a comprehensive coverage in the pension system without which even the best designed system would not be able to benefit the people it is supposed to help. South Korea's experience also shows that it is insufficient to rely solely on the pension system reform to improve old age income security and other elements of income and expenditure also need to be addressed with good coverage of beneficiaries. Moreover, with the sustainability issue of a pay-as-you-go pension system in an aging population, it is impertinent that a policy mix is required.

Another lesson from South Korea is the issue of timing. Although South Korea is earlier chronologically than Singapore in trying to address issues on the impact of changing family structure on old age income adequacy, demographically, they may have made the changes too late. This is because South Korea had been experiencing falling co-residence over the years while the pension changes were only made much later. Hence, timing of policies are of essence where policy interventions need to made more proactively, especially when the trends are already clear to us as are population trends which have a lag effect.

In summary, to improve old age income adequacy of elderly in Singapore, we need to ensure good coverage and to implement improvements timely and as soon as feasible. A policy mix would be best able to provide support for elderly as the over-reliance on the pension system is insufficient and unsustainable. Family support still remain important to support old age income adequacy of elderly and should continue to be encouraged. However, the bare assumption of the existence of family support while it is eroding that result in late implementation of necessary policies will leave at-risk elderly especially vulnerable.

b. Policy Options

As such, having done the comparative study, using our analytical framework of looking at income and expenditure compositions, we proposed some policy options for Singapore to improve old age income adequacy.

1) Policy options relating to improving elderly's income from own sources

i) Working income

Improving the employment chances of elderly can be an important source for the elderly. However, as earlier discussed, elderly who have exited the workforce finds it hard to re-enter the workforce. Hence policies can be directed to change employers' mind-set towards employing elderly employees.

Moreover, the work can be tailored to the elderly through flexi-work or changing of work environment to be more suited for elderly. Such mind-set change campaigns should also be directed to the rest of the population, i.e. as consumers and co-workers to be more tolerant towards elderly workers.

Another possible policy option would be to require companies to have a proportion of elderly workers in their employment, for example tying it to the foreign workers quote or waiver of levy to encourage companies to take on older workers.

ii) Pension benefits

As studied in South Korea's case, the coverage of pension system is very important. The CPF system has to improve coverage. Currently based on a resident population of over 600,000 of

elderly aged 60 and above in 2013[53], there are less than 200,000 with active CPF accounts.[54] Hence, the outreach for the elderly to have CPF accounts is important, especially considering that many government programs are based on CPF accounts such as Medisave top-ups.

As discussed, the amount of CPF savings can determine how much the elderly are able to benefit from the CPF revisions. Hence, there can be mandatory top-ups of elderly CPF savings by children who can afford it and whose parents do not have enough in the CPF account. An alternative is for top-ups to remain voluntary, but benefits may be staggered for example top-ups for elderly family members with balance below $60,000 can receive higher tax rebates.

Another consideration to strengthen the ability of CPF savings to improve old age income adequacy may be to consider a hybrid pension system. Building on the CPF system which covers a large majority of Singaporeans, Singapore can consider adding another pillar to the pension system through a component that is a universal pension. This universal pension can be graduated upwards, i.e. the older elderly receive a larger amount so as to cover the gradual drop of income for them as they age. The amount received should not differ between male and female elderly as this is also redistribution towards female elderly so that they are not penalized for not being able to have as high a CPF savings due to withdrawal from the workforce for care duties.

iii) Wealth

As earlier discussed, compared to South Korean elderly, Singaporean elderly are less likely to monetize their housing assets despite programs such as SHB and LBS. Due to the usage of CPF savings to purchase their housing, the amount of cash locked in housing can be substantial. Alternative to SHB and LBS, would be to encourage elderly to rent out vacant rooms in their flats by helping to facilitate this rental process through HDB. This is considering that elderly tend to stay in mature estates that are in high demand. This can be matched with for example with young couples who are waiting for their flats.

2) Policy options relating to improving elderly's income from other sources

i) Familial support

As seen in the comparison of Singapore and South Korea policies, family support remains a crucial component of elderly support. Hence, Singapore should continue to encourage family support as beyond financial support, families also provide important emotional and psychological support for elderly. Hence, educational activities to continue to encourage family support can be done to continue to support elderly family members.

[53] http://www.tablebuilder.singstat.gov.sg/publicfacing/partialDisplay.action;

[54] CPF 2013 Statistics

With regards to the criteria, the requirement of the dependent of not having an annual income of $4000[55] is relatively low. For example, if elderly rent out the room and receive $500 per month, their family will not be able to benefit from the tax relief even if they have to provide additionally to the elderly parent as $500 may not be sufficient as a monthly expense. This requirement should be reviewed to acknowledge a higher income is required for the elderly with rising cost of living and allow more families to benefit.

Another review of criteria would be to consider the changing family structure. As family support may go beyond between parent and child, e.g. from grandchild to grandparent, the criteria might need to be reviewed to encourage family support to consider different family structures.

The current policies encouraging family support tend to benefit the middle income families. As lower income families who do not pay taxes will not be able to benefit, a policy option would be to allow them to receive the tax benefit in cash to provide certain support for the family. Another consideration would be to allow family members who take care of elderly instead of hiring a FDW to receive the subsidy, i.e. the $145 subsidy in FDW levy of families hiring a maid to take care of an elderly parent.

Another policy option would be to relook at the Family Maintenance Act. Parents may have reservations to bring the case up against their children. However, the state may consider taking the case against the family if it is proven that the children are able to support the parent but instead the parent is required to rely on state support.

ii) Government social spending

As discussed, public assistance is especially important for elderly who do not have any other means of support. However, the complexity of criteria and application means that elderly who are in need may not be able to understand. Hence, the criteria may be simplified or qualification for public assistance made automatic.[56] Furthermore, the public assistance can be graduated based on age as the older elderly will have even fewer sources of income as they age, for example, unable to continue to work due to age-related health problems.

3) Policy options relating to Expenditure

While some of the policy options targeting expenditure items might be similar to government transfers, the policy options suggest a more nuanced consideration on how to further assist elderly in coping with their expenditures. The following schemes aim to provide assistance to elderly to coping with their cost of living through lower expenditure costs.

[55] Income includes taxable income (e.g. trade, employment, rental and SRS withdrawals), tax exempt income (e.g. bank interest, dividends and pensions), and foreign sourced income (regardless of whether it has been remitted to Singapore)

[56] The recently announced Silver Support Scheme is a similar concept though full details are pending.

i) Subsidies for food expenditure

As earlier noted, food and beverages combined with food serving services accounts for the largest portion in expenditure for Singaporean elderly regardless of gender and age. Government can help lower food budgets for seniors via direct cash transfer or food stamp to alleviate concerns about affordability of food by the elderly through collaborations with grocery stores. An example is NTUC Fairprice which gives a 3% discount for PG card holders on Mondays.[57]

ii) Utilities assistance

The existing utilities assistance (The GST Voucher – U Save and the Special Payment) is designed to help lower-and middle-income Singaporean households with their living expenses, depending on HDB flat type. To assist elderly in their utilities expenditure, elderly households can be offered further utilities subsidies for the first tranche of utilities used such as through an additional amount of U Save voucher offered to offset utilities expenditure. This can be graduated upwards for older households and help older elderly and elderly without family support, without excessively subsidizing those with higher usage due to overconsumption or those having more people staying with them.

iii) Healthcare expenditure assistance

While the PG card helps to subsidise elderly's expenses in outpatient, specialist and inpatient care (in combination with Medishield), long term health care expenditure is an area that is missing in the coverage. This is especially for older elderly and elderly without family support who need rehabilitation in case of a major illness. Hence, the coverage of the PG card can also be extended to cover such long term health care services such as elderly care centers, nursing homes and community care centers. At the same time, the PG card is limited to elderly who are 65 and above in 2014 and young elderly (those between 60 and 65) would not be able to benefit from it even if their situations do not differ greatly for the Pioneer Generation group. Hence, a PG card system with lower benefits can be given to these young elderly.

iv) Free public transport for elderly

Transport costs affect elderly decision with regards to employment opportunities, travelling for healthcare services and recreational activities. Hence free public transport (trains and buses) can be offered to elderly to allow them not to worry about transport costs and thus to seek a better quality life.

4) Other policy options

Beyond the dollars and cents, there are other areas of policy consideration that can also aid old age income adequacy. These include:

[57] Yong (2015), Pioneer Singaporeans get discounts, priority, special offers at NTUC supermarkets, outlets

i) Tackle fraud against the elders

Elderly living alone are especially vulnerable to crimes such as burglary and financial fraud. Laws to protect elderly can be implemented to deal with crimes against elderly with stricter punishment against offenders like crimes against juvenile. At the same time, educating elderly and their families about crime prevention such as scams and increasing financial literacy can help to increase awareness and crime prevention. The government can play an important role in conducting related campaigns and programs

ii) Support for NGOs

With non-government organizations' increasing involvement in aging process worldwide including in Singapore, NGOs are a crucial partner in supporting elderly financially and in providing services for elderly. They act as an important supplement of support beyond the formal sector and families. Hence, the government should engage NGOs more in the outreach of catering to elder needs as well as making NGOs more accessible to older persons by preparing, disseminating and periodically updating a national directory of relevant organizations concerned with ageing and of services. Support should also be provided to enhance the capacity and ability of these NGOs such as through instituting tax credit and granting funds to these organizations (especially those involved in operating integrated care centre and home-based services that specialize in providing cheap healthcare services to elderly)

iii) Information services

Provision of information service is another area that should be addressed by government policy in improving income situation for the elders. In many countries, programs that aim at providing advice on financial planning as well as legal consultation at low prices or even for free to the elders have been successfully implemented. The government can set up a joint hotline or consultation service for the senior citizens covering legal advice, family mediation and representation in a court or tribunal. Especially for senior citizens who are very old and less educated, government assistance on issues such as application for government benefit, family conflicts and inheritance would be crucial in guaranteeing them more income security. Another area of assistance is in financial planning and personal asset management to help old-age groups. A combination of credit counsellors and volunteers to assist senior individuals who may not have relatives or friends should be in place.

iv) Elderly CPI

As seen in our analysis, senior citizens have their own consumption patterns where food, transportation, healthcare and utilities rank the top four of their expenditure and how price increase in these areas will affect them more. Empirical studies have indicated that in most of the cases, CPI for the elderly group based on their basket of goods would outpace the usual measures of inflation which may be skewed towards higher weightages on housing or lower weight on healthcare. Hence, the government should base their subsidy amount tagged on price movements

on the actual consumption basket of the elderly instead. Such an elderly CPI can also be used to benchmark the retirement account component of the CPF to better prepare elderly for their retirement income.

c. Assessment of policy options

The assessment of our policy options is stated in Table 15.

Table 15: Assessment of policy options

Criteria:	Effectiveness	Fairness	Feasibility
1) Policies targeting elderly's own income			
i) Working income			
Promotional activities towards changing employers' mind-set	Low	High	High
Special work arrangements for elderly	Medium	Medium	Low
Promotional activities towards changing population mind-set	Low	High	High
Mandatory proportion of elderly workforce in companies	High	High	Low
ii) Pension benefits			
Increasing coverage of CPF accounts	Medium High for female and older elderly	High	Medium
Mandatory CPF top-ups	High	High	Low
Voluntary CPF top-ups with staggered benefits	Medium	Medium	High
Hybrid pension system with a component of universal pension	High, especially for at-risk groups	High	Medium
iii) Wealth			
Facilitate rental of vacant rooms	Medium	Medium	Low
2) Policies targeting elderly's income from other sources			
i) Familial support			
Educational activities to encourage family support	Medium	High	High
Review of tax criteria: - Change of dependent income level	High	Medium	High
Review of tax criteria:	Medium	Medium	High

- Change family structure definition			
Cashing out of tax benefit	High	High	Medium
Family members caring for elderly to receive FDW levy subsidy difference	High	High	Medium
State to sue children for maintenance on behalf of elderly	Medium	High	Low
ii) Government social spending			
Simplify application criteria	High, especially for at-risk groups	High	High
3) Policies targeting elderly's expenditure			
Subsidies for food expenditure	High	High	Low
Utilities assistance	High, especially for older elderly and those without family support	High	Medium
Healthcare expenditure assistance	High	High	Medium
Free public transport	High	High	Medium
4) Other policies			
Anti-fraud: Law to protect elderly	High	High	Low
Anti-fraud: Educating elderly and their families	High	High	High
Support for NGOs	Medium	Medium	High
Information services: Legal assistance	Low High for at-risk group	High	Medium
Information services: Financial advice	Low High for at-risk group	High	Medium
Elderly CPI	High	High	High

1) Policy options relating to improving elderly's income from own sources

Policies relating to working income through allowing elderly to have more working opportunities while most ranking high on fairness have a range of effectiveness and feasibility. Promotional activities towards changing mind-sets through ranking high on feasibility, ranking low in effectiveness. This is because it is not easy to change one's mind-sets as it takes time and is coloured by individual beliefs and prejudices. Special work arrangements are medium in effectiveness and fairness as companies need to make changes to accommodate elderly workers

while considerations for other group of workers also need to be factored at the company level. This affects the feasibility of this policy option when companies hesitate to implement such special arrangements. Mandating a proportion of workforce to be made up of older workers while high on effectiveness, ranks low on feasibility due to the non-market intervention stance of the government.

For policies relating to pension benefits, the increase in coverage of CPF accounts will especially help females and older elderly who are likely to have missed having CPF accounts as they might not be employed or have worked prior to the setting up of the CPF system. However, as it will be logistically hard to reach to everyone, feasibility is medium. Mandatory CPF top-ups will be low in feasibility in the current political climate to request higher flexibility of CPF accounts. In comparison, voluntary CPF top-ups with lower effectiveness and fairness, will be more feasible. A hybrid pension system will be especially effective for giving at-risk groups some protections if they are included in the CPF system. However, feasibility depends on the political climate on whether such changes will be welcomed due to the redistributive nature of the hybrid system.

Facilitating the rental of vacant rooms is medium in effectiveness and fairness in providing another avenue for elderly to monetise their housing asset. Feasibility is however low because there is an avenue to do it through the market though elderly might have less trust in the market compared to a scheme functioning by a government agency.

2) Policy options relating to improving elderly's income from other sources

Educational activities to encourage family support will be high in feasibility as it fits in with the government policy of family of first line of support. Considering that Singapore still has a strong culture of family support, continuous education activities will be medium in effectiveness in at least slowing the decline in family support of elderly family members. Changes in tax criteria will be high in feasibility as these are regularly reviewed through the annual government budget and push force by government to help middle-income families. However, as lower income families are not able to benefit, fairness is medium. Effectiveness is higher for change of dependent income level compared to changing family structure as more families will be able to benefit from the former change.

Cashing out of tax benefit and allowing family members caring for elderly to receive FDW levy subsidy difference is high on effectiveness and fairness as these benefit lower income families. However, feasibility is medium as these may require more administrative resources. Allowing the state to sue children on behalf of the elderly while high in fairness, is low in feasibility as it is politically sensitive.

The simplification of government transfer criteria will help to allow more elderly in need of help to get assistance through the scheme. Hence, it is especially effective for at-risk groups and high

in fairness by extending help to those in need. Feasibility is also high as the people are pushing the government to do more in social assistance.

3) Policy relating to expenditure

Expenditure based policies tend to be high on effectiveness as they are targeted towards the main expenditure items of elderly and are also especially effective for at-risk elderly who will be more sensitive to changes in their expenditure items. As expenditure policies can be structured to encompass all the elderly with variations to give more benefits to at-risk groups, it is high on fairness.

When we look at the feasibility, the situation is more complicated. Policy direction is wise, but the Singapore's government has traditionally been very careful in giving out handouts and going into a welfare society. However, with the increased public pressure from the people for more social assistance, the government is under stress to do more. Nonetheless we need to consider the stakeholders involved and the complexities of carrying out the policies will affect their feasibilities. The government has close links with the key stakeholders such as utility companies, hospitals and healthcare providers, public transport providers. They also have existing structures of collaboration such as utility, healthcare and transport subsidies. In contrast, the retail market while having large players such as NTUC Fairprice and Cold Storage, consists of many smaller retailers and lacks having a co-ordinating system. Hence, the feasibility of policies targeted at food expenditure will be low in feasibility compared to the other three expenditure options.

4) Other policy options

While legislation of protecting seniors from financial scams would be very effective in reducing elderly victims and would benefit the whole old-age population in general, it would take more time in studying and passing the law in parliament. On the other hand, educating elderly and their families about the crimes against the elderly will be more effective through crime prevention and increased public awareness. Such education will help all elderly and is highly feasible in Singapore.

Feasibility for the support of NGOs is high as the government is trying to reach as many people in need as possible. However, while support to NGOs is important, effectiveness may be limited by the need for NGO regulation as they access public funds to finance their programs and thus the efficiency of NGO operations need to be considered. Depending on the awareness of government agencies of the NGOs work and the causes they are supporting, different preferences may be given to different NGOs might render the government support skewed to a particular group of elders, to whom the NGO specializes to cater to, thus limiting the fairness to all NGOs.

With regards to the information service, as consultation and advice services are mainly one-to-one, the limited coverage will restrict its effectiveness. Nevertheless, due to it being especially

useful for at risk groups such as single elders, elders with low CPF savings or female seniors, it would be high in effectiveness for these groups. Constraints of implementation would mainly come from scarcity of resources with regard to legal and financial expertise thus limiting its feasibility on a large scale.

Construction of elderly CPI will improve the accuracy of information on the changes of needs of the elderly. This will increase the sensitivity of policies such as expenditure subsidy for the elderly, thus making it effective in addressing the old age income adequacy of the elderly. Since regular surveys are already conducted and age information easily retrievable, it will be highly feasible.

d. Prioritisation of policy recommendations

Having assessed our policy options, those that rated high in at least two of the three criteria are prioritised. In addition, we have considered additional policies that will further assist at-risk group. As from the lessons from comparing Singapore and South Korea, we recommend a policy mix targeting both income and expenditure that aims to cover as many elderly as possible to improve their old age income adequacy. Furthermore, additional policies are also considered where at-risk groups of elderly can especially benefit from. In addition, as per the lessons from South Korea, the timeliness of policy implementation is very important for elderly as they are unable to wait for assistance unlike younger cohorts of the population. As such, we only consider the short and medium term to reflect the timeliness required.

Table 16: Prioritisation of policy recommendations

Prioritisation consideration	Policy Options	Timeline
Rated "High" in all 3 criteria	Simplify application criteria	Short Term
	Anti-fraud: Educating elderly and their families	Short Term
	Elderly CPI	Short Term
Rated "High" in 2 criteria and "Medium" in 1 criterion	Hybrid pension system with a component of universal pension	Medium Term
	Educational activities to encourage family support	Short Term
	Review of tax criteria: Change of dependent income level	Short Term
	Cashing out of tax benefit	Medium Term
	Family members caring for elderly to receive FDW levy subsidy difference	Medium Term
	Utilities assistance	Medium Term
	Healthcare expenditure assistance	Medium Term

	Free public transport	Medium Term
Additional policies to consider for at-risk groups	Increasing coverage of CPF accounts	Short Term
	Information services: Legal assistance	Short Term
	Information services: Financial advice	Short Term

A consideration is the financial sustainability of the policy recommendations. While some are less costly, however, may have stronger financial impact. However, this may call for a new policy thinking by the Singapore government and Singaporeans in line with the changing family structure towards one that is community-based. While in the past support for elderly is within the family due to our familialist policy orientation, the concept of family may need to be extended to that of a community where Singaporeans alike come together to help support the elderly.

VI) Conclusion

In our study, we have looked at the current status of old age income security in Singapore and South Korea, both countries are facing changes in the family structure transition period by comparing old age income and expenditure. The aim is to analyze how will old age income security evolve with changing family structure and what should Singapore government do in order to improve old age income security learning from the experiences of South Korea.

We saw that expenditure mix of elderly of both countries is largely similar. In terms of income sources, Singapore elderly continue to have high reliance on transfers from children while South Korean elderly's family reliance have been falling as family support has dropped more for them. Personal wealth then becomes the main source of income for elderly in both countries with working income having increasing importance. Singaporean elderly rely little on CPF saving compared to other main sources and there are limited government transfers for the elderly. While South Korean elderly has a seemingly more comprehensive pension system, however the lack of coverage limits the benefit that they can receive from it. Hence, when we consider the change in family structure, several groups of elderly are identified to be vulnerable: female elderly, older elderly and elderly that do not have family support.

When we compared the policies in both countries, we saw that in terms of policy direction, Singapore has taken steps to continue encouraging family support while South Korea's policies are concentrated towards the elderly themselves. South Korea has been concentrating on building up the pension system but due to the immaturity and lack of coverage, South Korean elderly still receive little support. Singapore in comparison has a mix of policies and continues to encourage "family as first line of support". While this can help to arrest falling family support for elderly in Singapore, there is hesitant response to family structure change in Singapore.

The policy lessons from the comparison between Singapore and South Korea reminds us of the need for timely response to changes. As we expect more retiree households in Singapore and family structure to continue to evolve, we cannot afford to neglect the needed changes to policy to continue to support old age income adequacy. Coverage of policies is especially important and it is insufficient to rely solely on the pension system. As such, our policy recommendations are built on the basis of continued policy mix for more considerations of a rounded support for elderly. Prioritization of policy recommendations is made to choose policies that are most effective, fair and feasible, with additional considerations for vulnerable elderly.

Our study has certain limitations. As earlier discussed, data limitation has restricted us to the study of Singapore and South Korea when a comparison between Singapore and Seoul would be more ideal. Nonetheless, due to high rate of urbanization, the national level data of South Korea is a good representation and allows us to proceed with the comparison. In addition, although the level of details of statistics released by Singapore and South Korea differs, the statistics used allows us to study the trends and make comparable studies. Another data limitation would be that individual data would allow for a more detailed study of income and expenditure of elderly and this may be a future area of research that both countries can consider to better prepare for old age income adequacy of elderly.

During the course of the study, the Singapore government has also been making improvements to their policies to better support old age income adequacy such as the launch of the PG card. Other key policy changes are those included in the Budget 2015 announcements. Most of the policies are extensions of older policies that we have visited in our paper such as revisions to the CPF scheme. However, in the time of our study, there is little information of the Silver Support Scheme, a key policy which will supplement the income of lowest 20% to 30% of elderly to allow us to further study this policy. Nonetheless, the Silver Support Scheme will be a positive step towards addressing old age income inadequacy of the lowest quintile of the elderly households as we have highlighted in our study.

Our study is focused on the current elderly. As such, there might be limitations in extending the validity of the study to future elderly who are able to better prepare for retirement through higher CPF savings and extension of retirement age. On the other hand, the increased usage of CPF for more pricy housing and other uses, together with inflation, may still render the ability of CPF to benefit future elderly similarly as current elderly. Hence, the policies we have proposed remain relevant to consider old age income adequacy for future elderly.

Hence, despite the limitations, our study contributes to the policy consideration on how to help elderly in improving their old age income adequacy and that policy thinking needs to encompass a wider area beyond the CPF system. While the saying goes that “money is not everything”, the

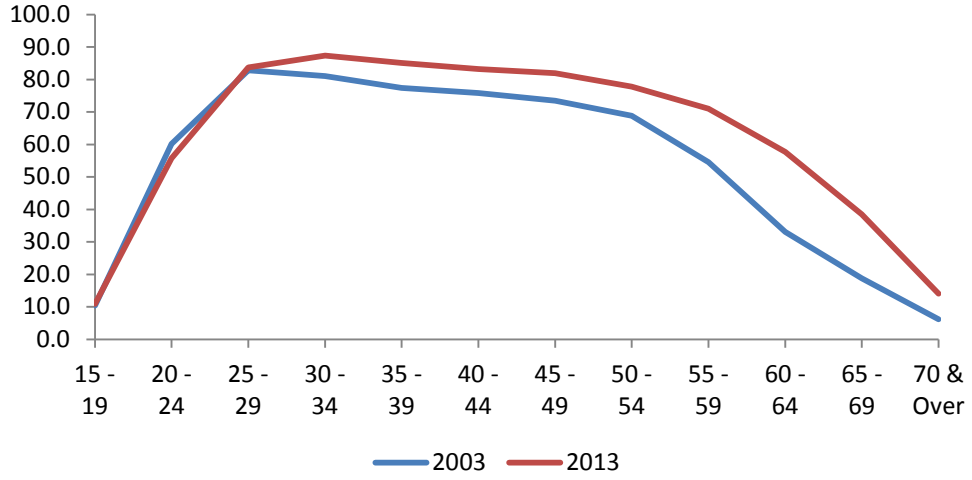
ability to be financially adequate is a very strong determinant in the quality of life that the elderly has, one that they deserve for having contributed so much to society throughout their lives.

Appendix I
Labour Force Survey 2013 on employment of workers aged 60 and above

Based on the survey results from the Labour Force Survey 2013, together with the increasing total labour force participation in Singapore, the elderly participation in the work force has increase from 2003 to 2013. Comparing the age ranges of 60 and above, the largest increase in participation rate is the highest in 60 to 64 age group and lowest in the above 70 age group. This reflects the limit in sustaining labour force participation beyond a certain effective retirement age. For those aged 60 and above the top reason stated for not working was poor health/disabled/too old. Other key reasons include retirement for the male elderly and housework duties for the female elderly.

Figure 23: Total labour force participation has increased from 2003 to 2013 in Singapore

Source: Labour Force in Singapore, 2013, Ministry of Manpower



As seen in Figure 23, about 60% of the total resident population aged 60 to 64 remain economically active in 2013. The proportion reduces in the older age groups. Across all age groups, the proportion of males working is higher than that of females.

Of the elderly who are working, 82% of those aged 60 to 64, 72% of those aged 65 to 69 and 65% of those aged 70 and over work full time. The percentage of females employed in full time work is lower than the males. For those who are working full time, their median salary in 2013 based on their education and gender is presented in Table 17. The higher educated elderly earn more than the lower educated elderly. For all education groups, there is a wage gap between the males and female elderly.

Table 18 presents the distribution of wages across age groups and wage ranges. Median salary falls as we go up the age groups. The fall of median wage for the males is greater than the females on the basis of higher starting median wage.

The summary of our findings on working income are:

- Labour force participation has increased amongst the elderly, though there is a limit in increase for those aged 70 and above.
- Labour force participation is higher amongst the male elderly compared to the female elderly across all age groups.
- The higher educated elderly have a higher median wage compared to the lower educated elderly.
- Median salary is lower for those 70 and above.
- Median gross salary for elderly males are higher across education qualifications and age groups.

Table 17: Proportion of resident population aged 60 and over by economic activity status, age and sex in Singapore (June 2013)

Source: Labour Force Survey, 2013, Ministry of Manpower, Singapore

Age (Years)	Total (In '000)	Economically Active (Percentage)									Economically Inactive (Percentage)		
		Total			Employed			Unemployed					
		Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
60 – 64	229.4	59.68%	37.71%	21.93%	57.63%	36.18%	21.49%	2.01%	1.57%	0.48%	40.32%	12.60%	27.72%
65 – 69	152.6	40.24%	25.82%	14.42%	38.53%	24.71%	13.83%	1.70%	1.11%	0.59%	59.76%	22.54%	37.22%
70 and above	267	14.42%	9.81%	4.61%	13.97%	9.44%	4.53%	0.45%	0.37%	0.04%	85.58%	33.03%	52.55%

Table 18: Median gross monthly income from work (excluding CPF) of full-time employed resident population aged 60 and over based on education in Singapore (June 2013)

Source: Labour Force Survey, 2013, Ministry of Manpower, Singapore

Age (Years)	Total	Primary & Below	Lower Secondary	Secondary	Post-Secondary (Non-Tertiary)	Diploma & Professional Qualification	Degree
60 & Over (Total)	1,800	1,148	1,517	2,172	2,167	4,667	7,898
60 & Over (Male)	2000	1300	1700	2167	2383	4702	8167
60 & Over (Female)	1408	1000	1200	2253	1950	4563	5818

Table 19: Employed residents aged 60 and above by gross monthly income from work (excluding employer CPF), age and sex in Singapore (June 2013)

Source: Labour Force Survey, 2013, Ministry of Manpower, Singapore

Gross Monthly Income (Excluding	60 - 64 (Total)	65 - 69 (Total)	70 & Over	60 - 64 (Male)	65 - 69 (Male)	70 & Over	60 - 64 (Female)	65 - 69 (Female)	70 & Over (Female)

Employer CPF)			(Total)			(Male)			
Total	**132.2**	**58.8**	**37.3**	**83.0**	**37.7**	**25.2**	**49.3**	**21.1**	**12.1**
Under $500	3.7	3.4	3.3	1.1	0.8	1.6	2.6	2.5	1.7
$500 - $999	23.2	15.2	13.1	9.0	7.6	7.7	14.2	7.5	**5.4***
$1,000 - $1,499	26.2	**13.3***	**7.8***	15.3	8.7	**5.5***	**11.0***	**4.6***	2.3
$1,500 - $1,999	**17.8***	8.1	3.6	12.5	**6.4***	2.8	5.2	1.7	0.8
$2,000 - $2,499	13.4	5.3	2.1	**9.4***	3.9	1.5	4.0	1.4	0.5
$2,500 - $2,999	7.6	2.6	1.0	5.5	1.8	0.8	2.2	0.8	0.2
$3,000 - $3,999	11.1	3.9	1.8	7.6	2.7	1.5	3.5	1.2	0.3
$4,000 - $4,999	6.4	1.8	1.0	4.6	1.5	0.8	1.8	0.3	0.2
$5,000 - $5,999	5.8	1.4	1.0	4.3	1.0	0.7	1.6	0.4	0.3
$6,000 - $6,999	3.3	0.8	0.5	2.5	0.6	0.5	0.9	0.1	-
$7,000 - $7,999	2.0	0.8	0.4	1.6	0.6	0.3	0.4	0.2	0.1
$8,000 - $8,999	1.8	0.3	0.2	1.4	0.2	0.2	0.4	0.1	-
$9,000 - $9,999	1.3	0.2	0.1	0.9	0.2	0.1	0.4	-	-
$10,000 - $10,999	1.8	0.7	0.3	1.4	0.6	0.3	0.4	-	-
$11,000 - $11,999	0.7	0.3	0.2	0.5	0.2	-	0.2	0.1	0.2
$12,000 & Over	6.1	1.1	1.1	5.4	0.9	1.0	0.7	0.2	0.1

Numbers are in '000s

* Median Salary of the age range

Appendix II

Further analysis: Retiree households in Singapore based on HES 12/13

Over the years, more elderly are living with their spouse only or alone. The number of retiree households which are households comprising solely non-working persons aged 60 years and over has also been steadily increasing by close to 35% from 62,400 in 2010 to 84,000 and in 2014, made up 23% of households with heads aged 60 and over.[58] Thus with the increasing number of retiree households, it is also important for us to understand their income adequacy, especially with no employment income. Based on the HES 2012/13, retiree households[59] made up a quarter of the households in the lowest income quintile in 2012. Without any income from work, retiree households are dependent on other sources of income.

Due to the data availability, the analysis will be based on dwelling type, which corresponds quite closely with the income level of the retirees households, i.e. the lower income tend to stay in small dwelling types which the higher income stay in bigger or private dwelling types as shown in Table 20. As such, although each dwelling type may have a spread of income levels within, dwelling type is a blunt tool that can be used to gauge the income level of households in Singapore.

Table 20: Distribution of source of income of retiree households by dwelling types in Singapore

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

Source of Household Income	Total	HDB Total	1- & 2-Room Flats	3-Room Flats	4-Room Flats	5-Room & Executive Flats	Condominiums & Other Apartments	Landed Properties
Rental Income[a]	18.6%	8.1%	0.0%	9.6%	10.1%	8.1%	30.6%	31.7%
Investment Income	26.3%	18.0%	2.6%	21.8%	16.2%	17.6%	25.7%	44.3%
Transfers[b]	26.4%	37.8%	39.4%	36.4%	41.7%	36.6%	12.7%	12.6%
CPF savings[c]	12.0%	13.9%	14.4%	13.6%	14.0%	13.8%	13.3%	6.9%
Others[d]	16.7%	22.1%	43.6%	18.6%	17.9%	23.9%	17.7%	4.5%
Total (%)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total ($)	**1,735**	**1,147**	**647**	**1,069**	**1,233**	**1,806**	**3,851**	**5,306**

[a] Excludes imputed rental of owner-occupied accommodation

[b] Transfers from relatives and friends not staying in the same household

[58] Income survey 2014.

[59] "Retiree households" are defined as those households comprising solely non-working persons aged 60 years and over.

[c] Annuities and Monthly Payouts from CPF Minimum Sum Scheme, CPF LIFE

[d] Income from pension, social welfare grant, regular payment from insurance protection policies and regular government transfers.

Looking at the source of income of the retiree households in HDB dwelling types, transfers from family and friends is generally similar in percentage regardless of the size of the flat, ranging from 36.4% to 41.7%. Similarly, CPF savings contribute around the same proportion of between 13.6% to 14.4% for the HDB dwelling types.

The main differentiator between retiree households in 1- and 2-room flats compared to the other HDB dwellings, is the lack of rental income and investment income. This is compensated by the higher proportion taken up by other income sources, which might be mainly be government transfers which tend to be given based on dwelling type, with smaller flat receiving more transfers.

For the private dwelling types, rental income and investment income are the most important sources of income. Proportionately, they are less reliant on transfers from family and friends. For those staying in condominiums and other apartments, their reliance on CPF savings and other types of income is very similar to 3-room and 4-room households.

However, if we look at absolute dollar terms, there is a wide spread in income level across dwelling types. 1-room and 2-room households' average monthly household income is $647, which is half of 4-room households' and a third of 5-room households'. The average monthly income of HDB retiree households at $1.147 is less than a third of those staying in condominiums and other apartments.

Figure 24: Distribution of source of income for retiree households by dwelling types in Singapore

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

The distribution of dollar amount of the average monthly household expenditure by type of dwelling among retiree households in Table 20 is similar to the income distribution seen in Table 21. However, the disparity in expenditure is less than the disparity in income. Average monthly expenditure of 1-room and 2-room households is 57% of 4-room households and 43% of 5-room households.

Table 21: Average Monthly Household Expenditure by Type of Dwelling Among Retiree Households in Singapore

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

Source of Household Income	Total	HDB Total	1- & 2-Room Flats	3-Room Flats	4-Room Flats	5-Room & Executive Flats	Condominiums & Other Apartments	Landed Properties
Total ($)	1,697.1	1,267.9	855.4	1,002.9	1,495.0	1,990.9	3,423.8	4,121.3

Figure 25: Distribution of expenditure by type of goods for retiree households by dwelling types in Singapore

Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore

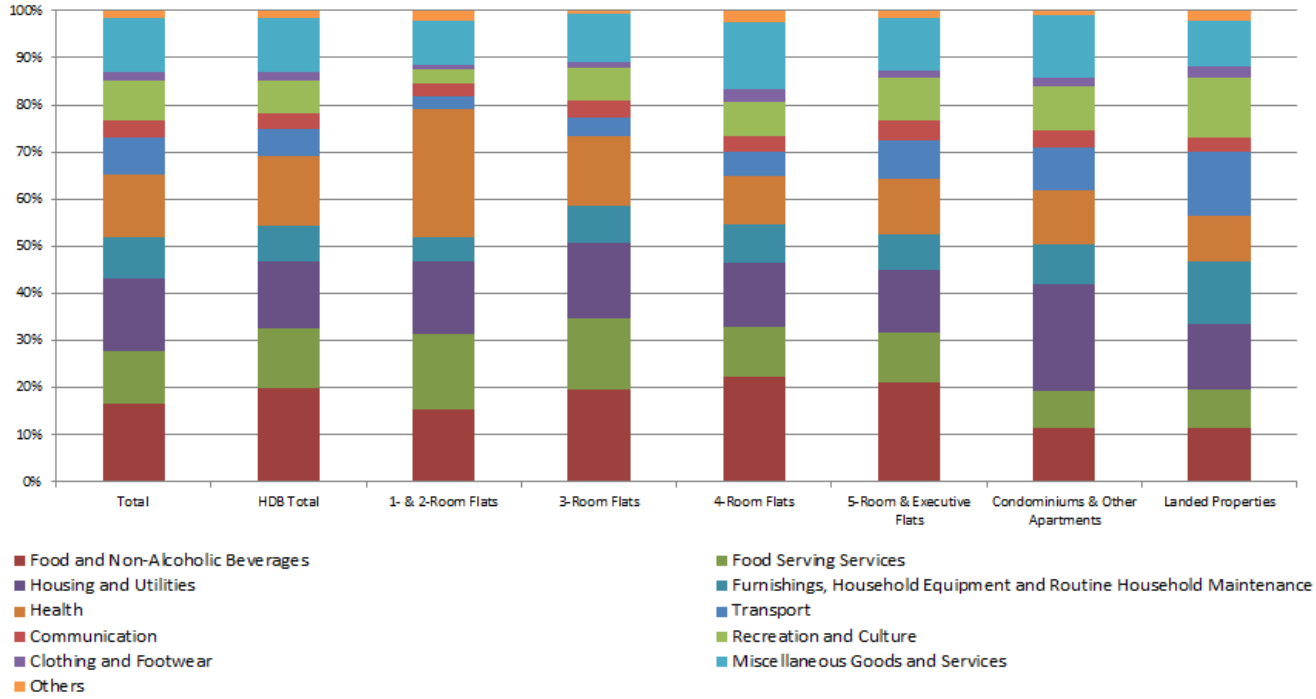


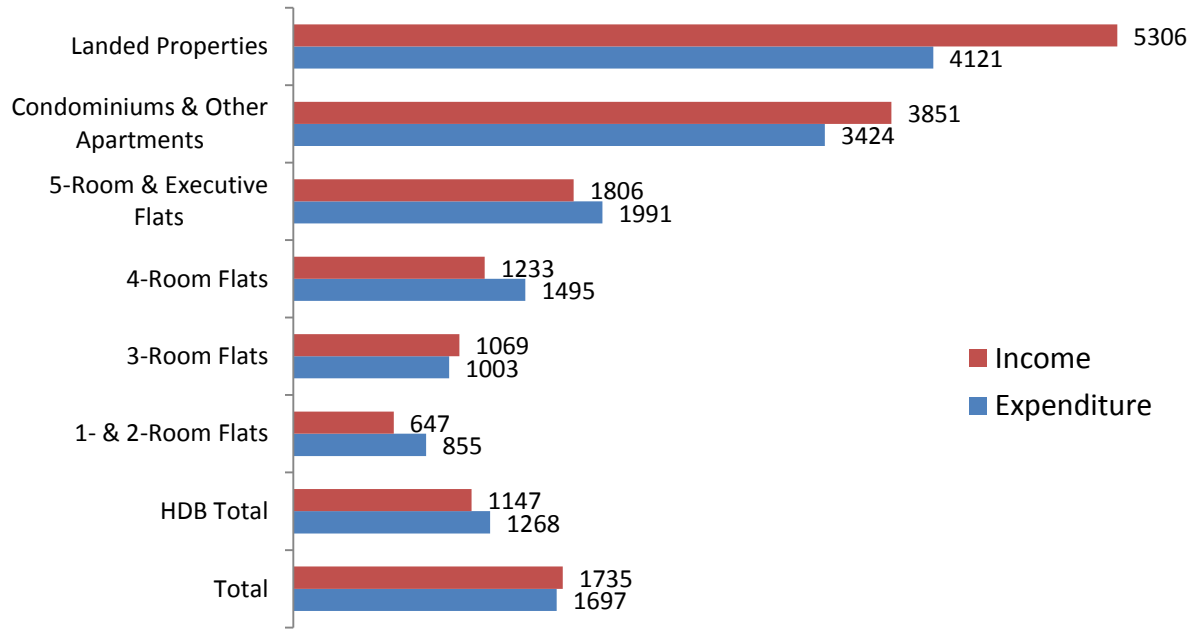
Figure 25 shows the distribution of expenditure by type of goods for retiree households by dwelling types, excluding imputed rental. What stood out in the comparison by dwelling type is that 1-room and 2-room households spend the highest proportion of their expenditure on health expenses. Compared to the rest of the HDB dwelling types, they spend similar proportions in housing and utilities expenses and food serving services but proportionately less on food. This

suggests that health and housing and utilities expenditures that have lesser flexibility in adjusting compared to food expenditures. The stickiness of food serving services expenditures, which are expenses for food in hawker centres and restaurants, in 1-room and 2-room households may be due to inability of the households to cook because of certain limitations or it being a type of recreational activity for them.

As we move up the dwelling type, we see that proportion of expenditure on transport and culture and recreation increases. Transport costs may be due to expenditure on private cars while being of higher average income, the retiree households are able to participate in more recreational activities. For the private dwelling types, housing and utilities and other housing maintenance take up a higher proportion of their expenditure compared to other items. For the condominiums and other apartments, a possibility is the monthly maintenance charges of condominiums. Furthermore, any maintenance required of private dwelling types will need to be paid in full by the owners and not eligible for any government subsidies.

To have a sense of retirement income adequacy of retiree households, we will compare the average monthly income and expenditure across dwelling types. As shown in Figure 26, we see that except for the 3-room households, the retiree households in the rest of the HDB dwelling types see a higher average monthly expenditure compared to their average monthly income. For the private dwelling types, the retiree households on average have a higher income compared to expenditure.

Figure 26: Expenditure exceeds income for most HDB retiree households in Singapore
Source: Household Expenditure Survey 2012/13, Department of Statistics, Singapore



For the 1-room households, the difference in average income and average expenditure is $208. This means that 4 months of income can only cover 3 months of expenditure. For 4-room households, the difference is $262, where 6 months of income is needed to cover 5 month of expenditure. For 5-room households, the difference is $185 and 10 months of income is needed to cover 9 months of expenditure. Assuming no change in income and expenditure, no inflation, an income stream planned for 20 years of retirement will be used up in 15 years by 1-room and 2-room households, 16.7 years by 4-room households and 18 years by 5-room households.

If we factor in inflation, the retirement income adequacy of these households worsens and it is likely that the 3-room flat households also have inadequate income for their expenditure. This is because expenditure will rise with inflation while their income will remain static. With very little proportion in investment and rental income, CPF annuities payment at a fixed amount, these households will need to rely more on transfers

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