Reforming Old Age Security: Income Distribution and Poverty among Single Senior Canadian Women

by

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B.A., Western Washington University, 1998

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ABSTRACT

Canada's public pension programs have raised seniors' incomes, but have not succeeded in lifting some, especially single women, above the Low Income Cut-Off. Old Age Security (OAS) may need structural reforms, due to its nearly universal nature and its use of an individual income test. Many single women rely on OAS as their main income source, though demographic trends may lead to reductions in the program. Relevant research around these issues is discussed and policy options are suggested. Each option is simulated using the Social Policy Simulation Database and Model and the distributional impacts are analyzed. Removing the income test would increase income inequality and low-income rates. Reducing the income threshold for the test would decrease these rates. Changing to a family income test is also examined. Given the costs involved, it would be difficult to make large improvements for single senior women by reforming OAS alone.

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Chapter 1 – The Canadian Retirement System

I. Introduction

A. Context and motivation

Despite the introduction of Old Age Security (OAS) in 1952 and Canada Pension Plan (CPP) in 1965, many Canadians over the age of 65, particularly single women, are living in poverty[1]. While only 6.3% of senior[2] couples are considered poor, approximately 45.6% of single female seniors and 32.8% of single male seniors are poor[3] (National Council of Welfare, 2004). Single women make up 80% of Guaranteed Income Supplement (GIS)[4] recipients (National Council of Welfare, 1999). There is also evidence that some eligible women are not applying for, so are therefore not receiving, GIS (House of Commons, 2001). Even though these figures have improved over the last few decades, one must ask whether government programs could be doing more to alleviate the situation. The Organisation for Economic Co-operation and Development (OECD) has noted that, though the incomes of seniors in Canada have been improving, certain subgroups still have insufficient incomes (Baldwin, 2003).

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[1] There is no official poverty line in Canada. Two commonly used measures are the Low Income Cut-Offs published by Statistics Canada and the Market Basket Measure calculated by Human Resources and Skills Development Canada. For information on poverty measures, see the first section of chapter 2.

[2] In this paper, the word "senior" refers to someone 65 years of age or older.

[3] These figures are for 2001.

[4] GIS is paid to low income seniors and is described in the second section of this chapter.

In general, the economic situation for seniors in Canada has been improving. The parents of baby boomers[5] are the most well off seniors so far (Binstock & George, 1996). The percentage of seniors considered low-income is currently lower in Canada than in many OECD countries, which is due in part to the policies implemented during the past 50 years (Ianno, 2004) and the expansion and maturation of the public pension system (Prus, 1999). However, there is still much room for improvement. For example, most seniors (62.2%) had incomes under $20,000 in 1999 (Ianno, 2004). Furthermore, since the early 1980s, there has been concern about poverty among single senior women (Guest, 1985). Though this poverty is decreasing, it is still high and has not been adequately addressed. Some argue that public and private pensions have been developed based on typical male scenarios and have treated women as "dependants" (Guest, 1985), but there are certainly various causes of this problem.

Future seniors are also at risk. The baby boom generation has a high level of income inequality (Gini=.44 in 1996, compared to .32 in 1994 for all Canadians (World Bank, 1998))[6], which will likely be perpetuated when it reaches retirement (Gee, 1999). Some researchers claim that baby boomers will be worse off than their parents, while others argue that better pensions and higher net worth will create a better post-retirement situation for them (Binstock & George, 1996). As labour markets and the economy change, and private pension plans and savings are more difficult to maintain, future seniors may rely even more on government transfers. Baldwin (2003) notes a few trends

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[5] Baby boomers are generally considered to be the generation born after World War II. Dates of birth between 1946 and 1962 are commonly used to define this generation (Gee, 1999).

[6] The Gini coefficient measures income distribution. Gini equals zero when income is equally distributed. The maximum value is one and would occur if one person had all of the income. According to Gee (1999), values over .4 indicate a high level of inequality. For information on the Gini, see the first section of chapter 2.

that may be cause for concern. If economic circumstances change, the strides made in improving seniors' incomes could be reversed. Women are especially at risk since they rely more on OAS and private savings in retirement, while men rely on CPP and private pensions. In an economic downturn, women's sources of income could be more susceptible to reduction than men's. The average income for women has consistently been lower than that of men, which impacts resources available for retirement. As women's labour force participation continues to increase, as well as their average wages, the composition of their retirement income will likely change.

These possible future trends will have a potentially large impact on low-income seniors and women. The Canadian retirement system is largely focussed around private market provision. Unlike those in many European countries, Canadian public pensions only provide a basic level of income. The current system assumes that people will provide the majority of their own retirement income, through savings, investments and private pensions. This type of system requires a large amount of individual planning and financial resources that may not be feasible for a large number of Canadians. Furthermore, private pension plans are becoming less generous, mainly due to cost issues. Though portability and vesting problems have been improved by government regulation, there is still low private pension coverage and many plans are defined contribution[7] (Baldwin, 2003). Therefore, the adequacy of private pensions and savings is uncertain. Exacerbating this economic situation are demographic trends that may force governments to reduce public pension benefits.

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[7] Defined contribution plans do not guarantee benefit levels, as the more generous defined benefit plans do.

Drivers of change

The economic situation of seniors and the current retirement system create a context in which various forces are pushing for change. These forces, or drivers of change, signal a possible need to reform the retirement system in general and OAS specifically. The following provides an introduction to these drivers of change. The first section of chapter 2 provides a more detailed discussion and analysis of these issues.

The incidence of poverty among certain subgroups of seniors is one issue that is driving calls for reform of public pensions. Single senior women living in poverty have been a concern for over 20 years that has yet to be addressed adequately. The GIS was meant to be a temporary measure when it started in 1967, which would be phased out as CPP matured. However, approximately 36% of OAS recipients still receive GIS (National Advisory Council on Aging, 2003). The federal government also continues to increase the maximum amount of GIS, showing it understands that GIS continues to be an important program for low-income seniors. Though many seniors have adequate incomes, there is still a significant group living in poverty. Even OAS and GIS payments together do not lift many single seniors above the Low Income Cut Off, which is used in this paper to approximate a poverty line (see Table 2 and Figure 1). These distributional issues are important concerns.

While poverty among seniors is a concern, demographic pressures are putting public pensions at risk. As in most industrialized countries, the birth rate in Canada has been decreasing and life expectancy increasing. This, combined with the aging of the baby boom generation, has led some to claim that public pension systems will become unsustainable and are in need of reform. The number of seniors is expected to double

from 1996 to 2030 (Department of Finance, 1996). A projected increase in the dependency ratio is often cited as the signal of unaffordability.[8] There will be fewer productive workers to support payments to retired people. Others argue that though the percentage of the population that is elderly will increase, so will GDP, allowing public pensions to remain affordable. There is currently no agreement on the extent to which demographics will require a change to public pensions or on the definition of "affordable." Canada currently spends a smaller portion of GDP on social programs than many European countries. However, as the costs of these programs inevitably rise, they will become more susceptible to calls for reduction (Baldwin, 2003).

Both the demographic and distributional issues conflict with the universality principle. OAS was originally intended to be a universal demogrant[9] to be paid to all seniors. Currently, OAS benefits are income-tested: benefits are reduced when individual income exceeds an income threshold. This reduction is referred to as the OAS claw-back.[10] Some see OAS as having inherent distributional problems. Benefits are based on individual income and many middle and upper-income seniors receive benefits from the program (Slater, 1998). Though there is currently a small OAS claw-back, it is not based on family income. Therefore, a low-income individual married to a high-income

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[8] For a discussion of the dependency ratio, see the first section of chapter 2.

[9] A demogrant is a transfer payment given to all people having a certain characteristic, regardless of income.

[10] The mechanics of OAS are discussed more in section II of this chapter. The history of changes to the program are covered in part B of section II

individual could be entitled to the full payment, which may violate the principle of horizontal equity.[11]

Most of the focus of pension reform discussions has been on CPP and subsidization of private savings and pensions.[12] As Table 1 shows, a significant proportion of government revenue is spent on retirement-related programs. The private pension and investment industry is also large. Given the amount of money involved, the distributional impacts of these programs are important. In 1997, CPP was reformed in response to demographic and sustainability concerns. Reforming OAS has proved to be more difficult, even though an equally large amount of money is spent on this program. To address demographic and income distribution concerns, an attempt was made to reform OAS in 1996 with the Seniors Benefit proposal (Department of Finance, 1996). Due to strong political pressures, the reforms were not implemented. Decreasing universality and changing from an individual to a family income test were two highly contested issues (Battle, 2003). This failed proposal is discussed more later in this chapter.

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[11] Horizontal equity is the distribution of taxes and transfers equally among people with the same ability to pay. It is generally considered "fair" that people with the same incomes bear the same burden of tax. Horizontal equity is discussed further in section II of this chapter and in chapter 2.

[12] The mechanics of CPP are described in part A of section II and some reforms to the program are outlined in part B of section II. Tax expenditures related to RRSPs and private pensions are described and discussed in section II.

Table 1: Federal expenditures on selected parts of the Canadian retirement system, expressed in $, % of GDP and % of government revenues

Program	Expenditure, in millions	% GDP[13]	% Total Federal Gov. Revenue[14]
Canada Pension Plan payments, 2002-2003	$21,575[15]	1.67%	10.87%
OAS (incl. GIS and Spousal Allowance) payments, 2003-2004	$26,902[16]	2.08%	13.55%
Non-taxation of GIS and Spousal Allowance, 2004	$ 295[17]	0.02%	0.15%
Canada/Quebec Pension Plan tax credit and non-taxation of employer paid premiums, 2004	$ 6,330	0.49%	3.19%
Registered Retirement Savings Plan tax expenditures, net of tax on withdrawals, 2004	$ 7,515	0.58%	3.78%
Private pension tax expenditures, net of tax on withdrawals, 2004	$ 5,920	0.46%	2.98%
Age credit tax expenditure, 2004	$ 1,490	0.12%	0.75%
Pension credit tax expenditure, 2004	$ 435	0.03%	0.22%

Why focus on OAS?

Though there are many pieces to the retirement system in Canada, OAS will be the focus of this study for three reasons. The primary reason is that OAS has unique features. It is a non-contributory, nearly universal payment.[18] Because of its non-contributory and non-funded basis, future increases in OAS payments have the potential to largely affect the federal budget. Its non-contributory nature also makes it one of the most redistributive parts of the Canadian retirement system. It increases vertical equity[19]

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[13] Based on income-based GDP for 2004 published by Statistics Canada of $1,293,289 million

[14] Based on total revenue from 2003-2004 Government of Canada Annual Financial Report of $198,547 million

[15] CPP Annual Report, 2002-2003

[16] Government of Canada Annual Financial Report, 2003-2004

[17] Remaining expenditure figures are Department of Finance projections from "Tax Expenditures and Evaluations – 2004." Mintz and Wilson (1996) note that tax expenditures are calculated based on the difference from a benchmark tax base. There is no agreement on what should be used as the benchmark.

[18] 95% of recipients received the maximum in 2000 (Battle, 2003)

[19] Vertical equity is the distribution of tax burdens and government transfers according to peoples' abilities to pay. "Ability to pay" is generally defined as annual income. A progressive tax system would distribute

and redistributes income, since it is funded from general federal government taxes, which are progressive (Vermaeten et al., 1994). Secondly, it is a highly visible program. Other government expenditures, such as tax credits and deductions, are somewhat hidden and do not necessarily result in the receipt of a cheque from the government. People feel a deep sense of "entitlement" to OAS.[20] Thirdly, it is the largest source of income for seniors (Statistics Canada, 1999); and women rely more on OAS payments in their old age than men do, making it an important program to consider when looking at gender equality.

B. Project description

The purpose of this study is threefold. First of all, it evaluates the need for reform of the OAS system. This is done through a review of the related literature, current statistics and an analysis of the drivers of change. Secondly, it formulates realistic options for reform based on this review. Third, it simulates the distributional impacts of these policy options on seniors, highlighting the differential impacts on men and women. Income distribution for people aged 55-64 is incorporated in the analysis to provide a comparison group.

The need for reform of OAS is examined through an in-depth discussion of the drivers of change that were introduced in part A of this section. Based on this, and a picture of the current economic situation for seniors, policy options for reform are

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tax burdens more heavily on those with higher incomes. A more detailed discussion of these concepts is included in section II of this chapter and in chapter 2.

[20] Kennedy (1989) points out that the symbolism attached to OAS is much different than that attached to CPP. OAS is sometimes believed to be not "targeted" enough, while CPP is viewed as a good program, when in fact CPP is more regressive. CPP is viewed as a "savings plan."

suggested. The policy options are analyzed using the Social Policy Simulation Database and Model (SPSD/M). The SPSD/M is managed by Statistics Canada and is used for tax policy analysis. It is comprised of 100,000 representative Canadians and is used to simulate various changes to the tax/transfer system. The results of this study will be useful to policy makers and researchers. Those using the SPSD/M or studying pension policy or poverty will find it interesting and informative.

The remainder of this chapter provides background information on the retirement system in Canada and Old Age Security more specifically. Chapter 2 provides a more detailed discussion of and elaboration on the drivers of change. The chapter concludes with a discussion and description of the policy options examined in chapter 3. Chapter 3 contains a detailed analysis of the proposed policy options, as well as a description of the research method. Results of the analysis are discussed and related to the poverty and distribution issues identified. Conclusions and recommendations are included in chapter 4.

II. Background

This section provides background on the Canadian retirement system. The first part describes its components, along with a discussion of some useful tax policy concepts. The second part outlines some of the major changes that have been made to public pensions in Canada. The final part relates this project to other research that has been done on the Canadian retirement system.

A. The Canadian retirement system and Old Age Security

This part outlines the components of the retirement system in Canada. Public pensions are described and their payment levels are analyzed in the context of low income measures. Private savings are also discussed, as well as how they relate to consumption taxation. A framework for analyzing the tax/transfer system is briefly introduced.

OAS, GIS & SPA

The OAS program began in 1952 and is currently funded out of general government revenues. The program actually encompasses three separate payments: the OAS pension, Guaranteed Income Supplement (GIS), and Spousal Allowance (SPA). A taxable flat pension is paid to all Canadians age 65 and over who meet Canadian residency requirements. This is referred to as basic OAS, or merely "OAS". Beneficiaries must have a minimum of 10 years residency in Canada after reaching age 18. The payment is prorated based on each year of residency up to 40. There are special rules for absences from Canada and grandfathering provisions for those who were at least

25 years old on July 1, 1977 (the date the residency rules were changed). In 2005, the maximum annual OAS benefit was $5,661.

OAS was originally a demogrant. All Canadians over 65, regardless of income, were paid the same amount. In 1989, a small income test was added. The pension is currently reduced (or clawed back) at a rate of 15 cents (the reduction rate) for each dollar of individual income over $60,806 (the income threshold). The pension is completely clawed back at an income of $98,547. The total amount of the reduction is referred to as the OAS claw-back.

GIS was added to the program in 1966 and provides additional non-taxable payments to those age 65 and over with low incomes. Sponsored immigrants are not eligible for GIS. GIS was meant to compensate seniors who were not able to take advantage of the then new CPP program (Baldwin, 2003). For 2005, payments are made to those with incomes below $13,464 for singles and $17,568 for couples.[21] The maximum GIS payment is $6,728 for singles and $8,765 for couples and is reduced by 50 cents for each dollar of income other than OAS payments. Seniors with no other income besides OAS receive the maximum GIS. In the 2005/2006 federal budget, the maximum annual payment was increased by $432 (6.4%) for singles and $696 (7.9%) for couples. There are currently 1.6 million GIS recipients, over 1 million of whom are women (Government of Canada, 2005), despite the fact that it was meant to be a temporary program (Kennedy, 1989).

SPA was added in 1975 and is paid to individuals 60 to 64 years old, who are married to OAS recipients, when their combined incomes are below a certain threshold. It has been criticized for only applying to a small portion of the population (Guest, 1985).

[21] Income includes CPP and other retirement and investment income, but excludes OAS.

SPA is a small part of the OAS program and is closely related to GIS, so its effect on total program spending will be disregarded in this project.[22]

CPP

CPP, the other public pension program, is structured quite differently from the OAS/GIS program.[23] It is funded through both employee and employer mandatory contributions and payments are based on employment history and contributions. (Quebec administers its own plan, the Quebec Pension Plan, which is virtually identical to CPP.) Required contributions are currently 9.9% of earnings up to the Year's Maximum Pensionable Earnings (YMPE) of $41,100, with the first $3,500 of earnings excluded. The maximum CPP retirement benefit payment for 2005 was $9,945, though the average benefit paid in 2004 was only $5,483 (Social Development Canada, 2005). CPP is designed to replace 25% of average pre-retirement earnings (up to a maximum of average industrial wages). Given that average earnings for working women were $24,800 in 2003 and $39,100 for working men (Statistics Canada, 2005b), many Canadians will not make the maximum contributions and will not receive the maximum CPP. Though this is consistent with the design of the system, it is important to keep in mind when discussing the public pension income available to seniors. Also, average benefits are lower for women than for men due to women's lower labour force participation and lower pay

[22] There are also smaller provincial supplements, similar to GIS, available to low-income seniors in most provinces.

[23] In addition to a retirement pension, CPP also includes disability, survivor and death benefits.

(National Council of Welfare, 1999)[24]. Researchers are not in agreement about whether CPP, and the public pension system in general, is regressive or progressive.[25]

Comparison of public pension programs

A comparison of OAS, GIS, CPP and Statistics Canada Low Income Cut Offs[26] (LICO) is shown in Tables 2 and 3. The maximum OAS and GIS do not raise single seniors or senior couples above the poverty line, approximated by the LICO. Seniors must have additional pensions (private or CPP) or investments in order to have incomes above the LICO. As noted above, however, average CPP payments are lower than the maximum available and are lower for women than for men. Research has shown that GIS and CPP payments tend to offset each other, leading to a flat distribution of public pension benefits (Baldwin, 2003). None of the public pension payments are enough to bring seniors above the LICO, but they do provide more support than the social assistance that younger Canadians receive (National Council of Welfare, 2004). Tables 2 and 3 show that OAS and GIS bring couples much closer to the LICO than they do for singles.

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[24] Parents have the opportunity to exclude low-earnings months from the CPP benefit calculation while any of their children were under 7 years of age.

[25] For a summary of some of this research, see Kennedy (1989)

[26] For a discussion of the LICOs, see chapter 2.

Table 2: Comparison of public pension payments, single retiree, 2005

Maximum OAS, if other income <$60,806	5,661
Maximum GIS, phased out completely when other income >$13,464	6,728
Maximum CPP retirement pension	9,945
Average CPP retirement pension	5,483
Low Income Cut Off	17,407[27]

Table 3: Comparison of public pension payments, couple, 2005

Maximum OAS, if other income <$121,612	11,322
Maximum GIS, phased out completely when other income >$17,568	8,765
Maximum CPP retirement pension	19,890
Average CPP retirement pension	10,966
Low Income Cut Off	21,669[28]

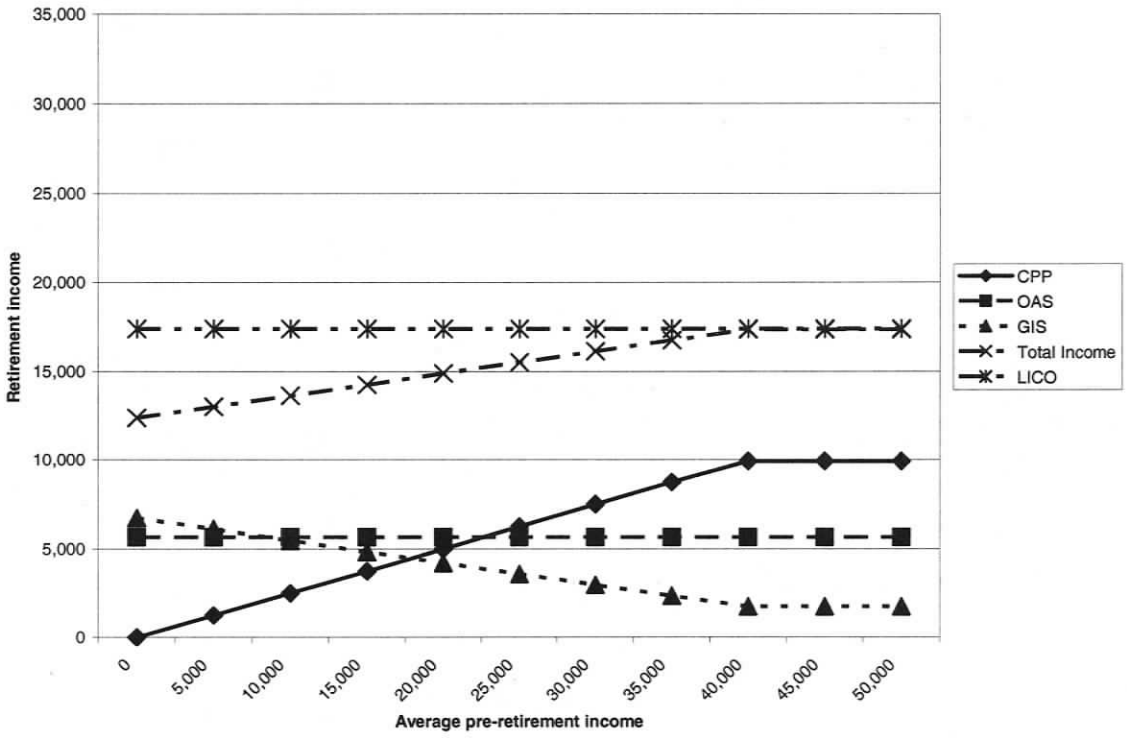
Figures 1, 2 and 3 show the components of income for retired Canadians, assuming no investment, employment or private pension income. The GIS and OAS shown on these charts would change if a person had any other type of income in retirement due to the income tests. A LICO measure is also included in the charts for comparison purposes. These charts clearly show that a married couple will be much better off than a single person in retirement. Figure 1 shows that a single person will not have retirement income equal to the LICO unless average pre-retirement income is $40,000. It is likely, however, that a person with this level of average income would have access to private savings and investments in retirement. Figure 2 shows retirement income for a couple in which the average pre-retirement earnings are split evenly and both people receive CPP. This type of couple receives two OAS payments and two CPP payments, yet it is recognized that a couple does not actually require twice the income of

[27] Based on a one person household, living in an urban area with a population of 30,000 to 99,999 in 2004

[28] Based on a two person household, living in an urban area with a population of 30,000 to 99,999 in 2004

a single person in order to achieve the same material standard of living.[29] For this reason, the LICO threshold is exceeded for couples with combined average pre-retirement incomes of $15,000. Retirement income plateaus at pre-retirement incomes over $80,000, which is double that of a single person.

Figure 1: Components of public pension income, single retiree



[29] See discussion of equivalency ratios in chapter 3.

Figure 2: Components of public pension income, dual-earner couple

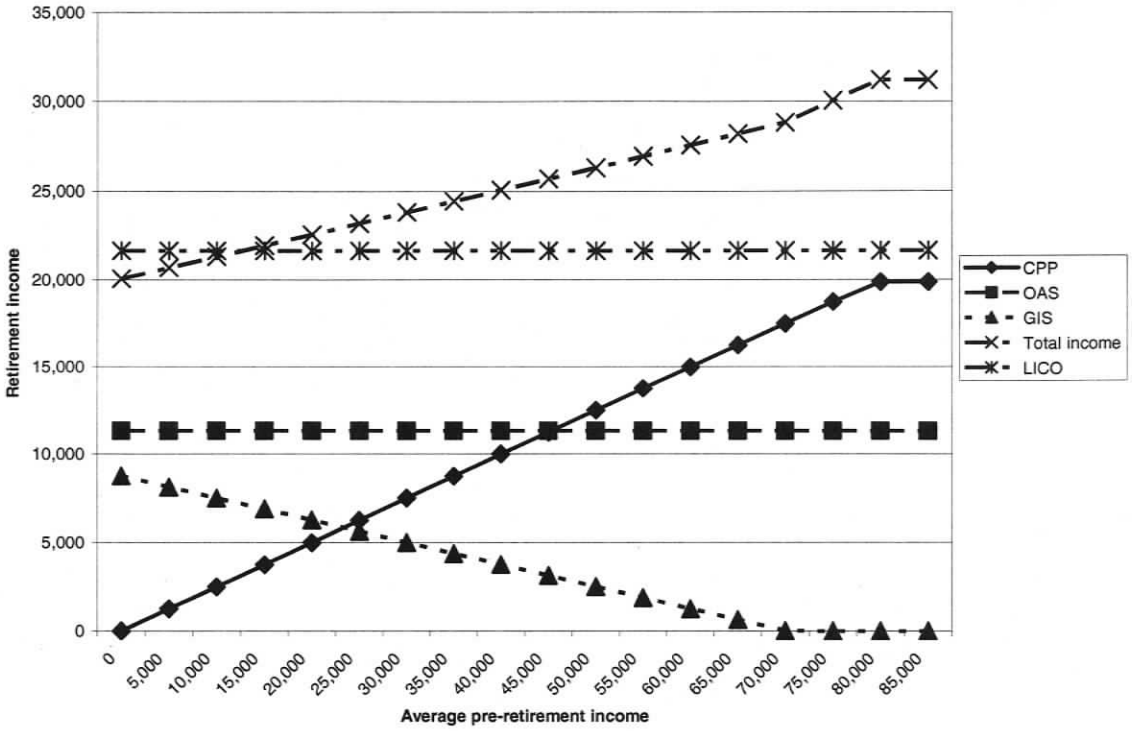
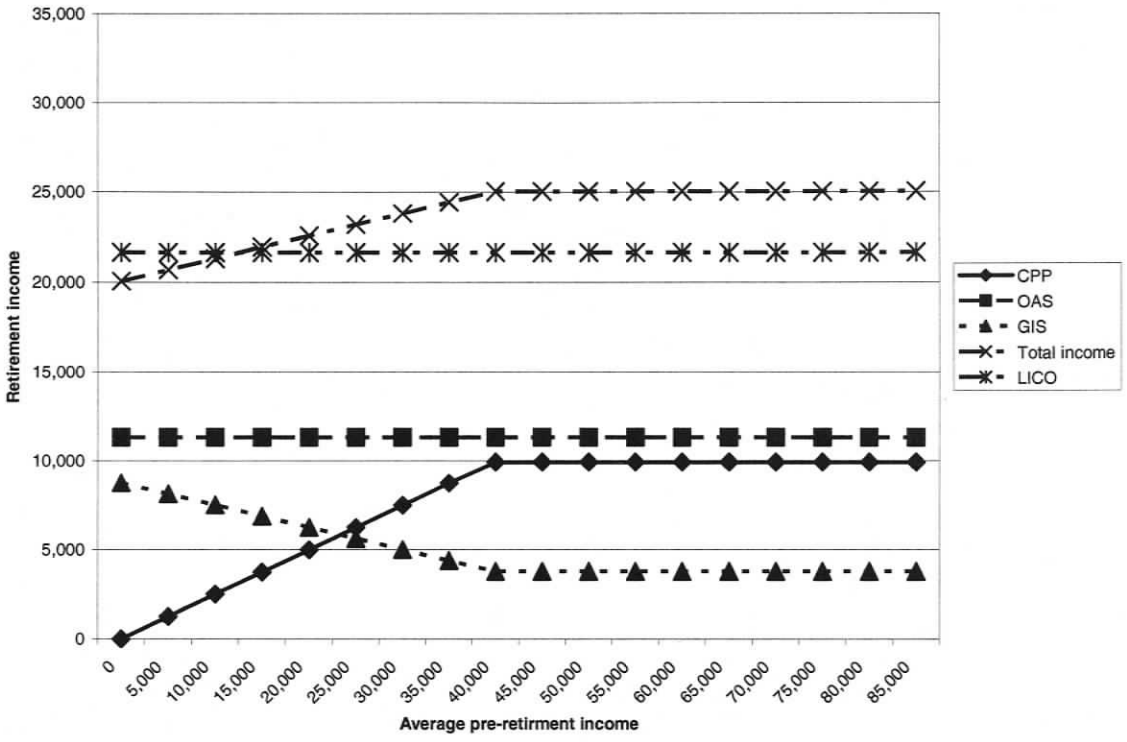


Figure 3 depicts a situation in which only one person in the couple earned the pre-retirement income, so there is only one CPP recipient. It is similar to Figure 2, in that the LICO threshold is exceeded when pre-retirement income reaches $15,000, but total income plateaus much earlier, at a pre-retirement income level of $40,000, due to the cap on CPP benefits only applying to one person. These three charts together demonstrate clearly how single seniors are in a much more difficult economic situation than senior couples. A single person with pre-retirement income of $15,000 would likely not have extra resources available for saving and has retirement income well below the LICO. A couple, on the other hand, has retirement income exceeding the LICO at this pre-retirement income level.

Figure 3: Components of public pension income, one-earner couple



Public pensions can be compared internationally, as well as to each other and to the LICO measure. In Canada, public pensions (OAS and CPP) are designed to replace approximately 40% of pre-retirement income (based on average wages) (Baldwin, 2003). This is significantly lower than in some other OECD countries. In Sweden and Germany, the income replacement rate of public pensions is 70% and in Iceland and Austria it is 80% (Gee, 1999). Public pensions also contribute varying amounts of post-retirement income in different countries. Government transfers comprise 54% of seniors' gross income in Canada, versus 44% in the US and 72% in Sweden (Prus, 1999). In the former West Germany, only 2% of seniors needed additional income-tested benefits (versus 53% of OAS pensioners who received GIS in Canada at the time) (Guest, 1985). Research generally shows that Canadian public pensions provide better benefits to low-income

retirees than those in the U.K. and the U.S., but lower benefits than those in many other European countries. It is important to keep in mind, however, that public pensions are only one component of a society's method of caring for its seniors.

Private pensions, RRSPs and savings

Many have claimed that public pensions are purposely kept low and inadequate to allow room for private pension plans and investment (Guest, 1985). The government is involved in the subsidization of private pension plans and private retirement savings. These measures are seen as a way to encourage self-sufficiency and decrease the burden borne by government to care for low income seniors. They are also used to increase the overall savings rate. Contributions to private pension plans (known as Registered Pension Plans or RPPs) are tax deductible for employees and employers. Contributions to Registered Retirement Savings Plans (RRSPs) are also tax deductible. These deductions are subject to maximums roughly equal to 18% of earned income up to $15,500 per year in 2004, with reductions to adjust for RPP coverage. Those with higher marginal tax rates (i.e. higher incomes) will receive the largest benefit from this deferral of tax. Making RRSP contributions is strongly correlated to income levels and few people use all of their RRSP "room" (Baldwin, 2003). Those with low-incomes see little or no benefit from using RRSPs. The tax savings is small, because they are subject to low marginal tax rates, and the savings creates retirement income that reduces their eligibility for GIS.

Approximately 43.4% of Canadian men and 40.3% of Canadian women are covered by private pension plans (National Council of Welfare, 1999). However, the

quality of these plans varies dramatically and some have recently faced financial difficulties (Baldwin, 2003). All covered people will not necessarily receive benefits from the plans, as there are portability and vesting rules. The high inflation of the late 1970s and early 1980s also negatively affected private pensions (Guest, 1985). The majority of covered employees are public servants and members of large unions, and only 4% of those earning less than $10,000 are covered (National Council of Welfare, 1999). Another startling aspect of private pension coverage is the confusion some workers have about their coverage. According to Statistics Canada (2004a), 4% of workers think they are covered by an employer-sponsored pension but in fact are not. This number increases to 9% among workers who have immigrated to Canada since 1991.

Approximately 38% of working-age Canadians make RRSP contributions (National Council of Welfare, 1999). The average contribution in 1994 was $3,200 for women and $4,470 for men (Frenken, 1996). In 2003, the overall average was $4,640 (McFeat, 2003). Upon attainment of age 69, RRSPs must be converted to annuities or withdrawn. Private savings and investments are another part of the retirement system. There are no limits on these sources. Home ownership is a significant way that many people "invest" for retirement. However, many low-income Canadians do not have the resources required to purchase a home, so cannot rely on its benefits in retirement.

The tax deductibility of RRSP and RPP contributions can be thought of from two different perspectives. First, government subsidization of these can be seen to be in government's, and society's, best interest. The encouragement of saving for retirement decreases the risk that people will need public support in their old age. It helps people to smooth their incomes over their lifetimes, in order to avoid years of low income after

they retire. In addition, increased savings is thought to be beneficial for the economy as a whole, as it leads to investment and economic growth. Allowing tax deductions for some amount of savings encourages "good" behaviour. Mintz and Wilson (1996) argue that savings should be encouraged for these reasons, even though the achievement of these goals may be in conflict with equity goals.[30]

Second, support of these registered savings vehicles is a move towards a personal consumption tax. Under a personal consumption tax, individuals would report their annual consumption instead of annual income. Annual consumption would equal annual income plus or minus changes in net wealth. Progressive tax rates could be maintained to preserve vertical equity characteristics of the personal income tax. Actual consumption would be the tax base instead of potential consumption (i.e. income) (Rosen et al., 2003). Kesselman (2000) notes that, because contributions to RRSPs and RPPs are tax deductible and capital gains on the sale of personal residences are non-taxable, almost 95% of Canadians are sheltering all their savings from tax so are already subject to a consumption tax. Only the top income group cannot shelter all savings from tax. He therefore states that "ability to pay" is measured differently for this group, since their tax base is not based on consumption.

When using a personal consumption tax, the incidence of tax over a person's lifetime must be considered instead of the amount of tax paid in any particular year. Supporters of this method of taxation, or at least a tax deduction for savings, argue that under an income tax, savings are effectively taxed twice: once when the income is initially earned and then again when capital income is earned on it (Mintz & Wilson,

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[30] They argue that equity should be achieved through a progressive income tax rate schedule and not through limitations on tax deductible savings.

1996). This encourages present consumption and discourages savings. Fortin (2000) argues that savings contribute to growth and should not be taxed. A consumption tax has been shown to have the lowest efficiency cost out of various tax base choices (Kesselman, 2004).

Rosen, Dahlby, Smith and Boothe (2003) provide some discussion of the arguments against a consumption tax. Although a consumption tax does not distort savings decisions, it does create behavioural effects in the decision between labour (consumption) and leisure. In addition, since the political and economic future is uncertain, employing a lifetime perspective and instituting a consumption tax may be difficult in practise. More discussion of the lifecycle framework is included in chapter 2, as it relates to the definition of income used for distributional analysis.

Tax credits

Two tax credits, the age and the pension credits, are usually included in a description of the Canadian retirement system. The age credit is available to those 65 years old and over and in 2004 amounted to $626 ($3,912 X 16% tax rate for tax credits). It is phased out for incomes over $29,124. The pension credit is available to anyone who receives pension income (excluding OAS and CPP) and the maximum amount is $160 ($1,000 X 16%). The pension credit has been equal to $1,000 before-tax since 1983, so has not been indexed to inflation. Some argue that these tax credits are inefficient and outdated (Slater, 1998).

Tax policy analysis

The tax/transfer system is generally analyzed based on equity and efficiency-based criteria, which are often conflicting (Fortin, 2000). Particularly when taxes (which are distortionary) are used to redistribute income, there is an equity/efficiency trade-off (Rosen et al., 2003). Other criteria frequently include simplicity, competitiveness, administrative cost, visibility, political sustainability and, especially in the case of transfers, affordability. Kesselman (2000) uses equity, efficiency and growth, and simplicity. He also cautions that, "one must use a mix of objective economic analysis and personal value judgements" when assessing these criteria (p.6).

Efficiency is considered to be a minimization of the economic costs (the deadweight loss) of the tax. When taxes are imposed, rational individuals change their behaviours accordingly. This causes distortions and leads to an inefficient allocation of resources and a reduction in overall economic well-being. The higher the marginal tax rates, or the amount of tax paid on the last dollar of income, the greater the behavioural distortion. Incentives to earn income at the margin are diminished with high marginal tax rates.

Equity relates to how the tax burden is distributed among the population (Rosen et al., 2003). It is generally considered to have two components: vertical and horizontal. Vertical equity relates to how much of the overall tax burden is paid by people in different income classes. The principle is that payments should be related to ability to pay. Horizontal equity relates to whether people with the same income pay the same amount of tax (Kesselman, 2000). Though in a perfect world vertical equity implies horizontal equity, horizontal and vertical equity may be in conflict (Musgrave, 1990).

This is due to an imperfect definition of the tax base, behavioural effects and the interaction of various taxes.

Vertical equity is generally associated with progressivity, which means that tax burdens rise as income rises (Kesselman, 2000). The concept of vertical equity means that those with more ability to pay should bear more of the costs of the tax/transfer system. Conversely, those with less ability to pay should bear less of the costs of the tax/transfer system and benefit more from it. Ability to pay, however, is not a simple concept. For example, should this be measured on annual income or lifetime income? What about potential[31] versus annual income? The definition of "ability to pay" relates to the lifecycle framework, which will be explored more in chapter 2.

Horizontal equity means that those with the same ability to pay should bear the same cost of the tax/transfer system. In other words, equals should be treated as equals. Like the concept of vertical equity, horizontal equity cannot be determined without first defining "ability to pay" or some other measure to be used to determine equals. Also related to horizontal equity, is the question of what unit should be used to determine "ability to pay." Should it be the individual or the household? These questions, and how they relate to OAS, are discussed in chapter 2.

Discussion

The OAS program could be analyzed based on any and all of the criteria discussed in the previous paragraphs. Behavioural effects associated with OAS and GIS payments, the taxes that pay for OAS and GIS, and the OAS claw-back could be assessed

[31] Potential income would take people's labour choices into consideration. For example, if a person has the opportunity to work, but chooses not to, their actual annual income would change based on this choice, but not their potential income.

in order to determine the effects on economic efficiency. Individuals likely change their savings and labour decisions based on the availability and parameters of this program. This likely creates distortion and inefficiencies. The complexity of the OAS program could also be studied. There are likely improvements that could be made to decrease administrative costs for both the government and recipients. In addition, having two separate public pension programs, with one of them comprised of three separate payments, may be more complex than is necessary. Changes could also increase the take-up rates for the program (as discussed in the second part of this section). However, this study is mainly concerned with the equity, or distributional, issues. Horizontal and vertical equity, and how they relate to OAS and possible policy options, are discussed in chapter 2. Given that OAS is a transfer program, sustainability will also be discussed in chapter 2. If the government is spending too much of GDP on the program, this could have efficiency costs as well as create sustainability problems.

The two goals of Canadian retirement income policy have been to minimize poverty and to maintain adequate income replacement levels (Guest, 1985). Critiques of the current retirement system in Canada come from all sides. Some feel that the current system is discouraging private savings (both in and out of RRSPs) and costing too much (in the form of CPP contributions). RRSP limits are believed to be too low, since high income earners cannot contribute 18% of their earnings, due to the dollar limit, so cannot maintain pre-retirement income levels (Hamilton, 1999). Both the Investment Funds Institute of Canada and the Investment Dealers Association of Canada are among groups supporting an increase in the RRSP limit (CBC News, 2005a). Government appears to be paying attention to some of these criticisms, as CPP contribution rates were frozen as of

2003 and RRSP limits were increased in the 2005 federal budget. Others (National Council of Welfare, Guest) feel that the poverty minimization goal is not being met and that the current system is inequitable.

Much of the retirement system in Canada does not appear to promote vertical equity, at least when assessed on an annual income basis. RRSPs and private pensions are directly related to pre-retirement earnings and any inequality that existed before retirement is perpetuated. Furthermore, the benefits of tax subsidization of these programs are enjoyed disproportionately by wealthier Canadians and, consequently, by a disproportionate percentage of males, since they have higher incomes and savings rates. CPP benefits provide slightly more equity since there is a maximum benefit and a portion of earnings are excluded from contributions. However, CPP has been shown to be regressive (Guest, 1985). The pension credit is slightly inequitable, since a person must actually have pension income in order to claim it and many low income seniors are not able to take advantage of it. The age credit increases vertical equity slightly.[32] This leaves the OAS program as the only part of the Canadian system that significantly increases vertical equity among seniors.

Although younger groups of the population experience just as much income inequality, if not more, vertical equity is important for seniors because of the large amount of government spending in this area. Past reforms have decreased vertical equity problems, but they still exist. This paper will discuss how future reforms can continue to improve both vertical and horizontal equity and not increase current inequalities.

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[32] The age credit, however, decreases horizontal equity between senior and non-senior individuals with the same income (Kesselman, 2000).

B. Reforms of Old Age Security and Canada Pension Plan

Two main attempts at significant reforms to OAS have failed, though incremental changes have been implemented along the way. A major reform of CPP was completed in 1997 (implemented in January 1998), which may have decreased the urgency for OAS reforms.

OAS reforms

The OAS program began as part of the Old Age Security and Old Age Assistance Acts of 1951. A monthly demogrant was paid to seniors 70 and over who met residency requirements and a means-tested payment was made to those 65-69 years old. Starting in 1965, the eligibility age for the OAS demogrant was gradually lowered to 65. The means-tested payment was phased out with the introduction of GIS in 1966 (Kennedy, 1989). The programs were originally funded by a separate OAS tax. This was abandoned in 1971, as payments already exceeded the amount of revenue created by the tax. In 1973, OAS and GIS were increased and indexed to the Consumer Price Index.

In 1977, the residency rules were changed for OAS. Rather than providing full benefits to all Canadians with 10 years of residency, benefits were prorated for anyone with less than 40 years residency (CAW, 1995). In 1984, GIS was changed to include a top-up for new immigrants to compensate for the reduction in OAS due to the residency requirements (National Council of Welfare, 1999).

In 1985, in the face of large government deficits, the Mulroney government attempted to partially de-index OAS. Payments would only increase for inflation over 3%. This led to a now famous confrontation between the prime minister and an elderly

woman named Solange Denis. Due to severe opposition, the changes were not made, but the government did de-index the personal income tax system[33] (Battle, 2003).

In 1989, the OAS claw-back was introduced. High-income seniors lost 15 cents of benefits for each dollar of income above the specified income threshold. In 2000, approximately 5% of seniors were subject to the claw-back (Battle, 2003).

Seniors Benefit

In 1996, the Chrétien government attempted to replace OAS and other parts of the retirement system with the Seniors Benefit. This plan was mainly a response to future demographic pressures, as well as slower projected economic growth than in the 1960s and 1970s (Department of Finance, 1996). To improve the sustainability of the OAS program, the new program was to be better targeted at lower-income seniors. It was to be a comprehensive non-taxable benefit that would replace OAS, GIS, SPA and the age and pension credits. The benefit was to be indexed to inflation and phased out based on the combined income of seniors and their spouses. Reduction rates were to be 50 cents for each dollar of other income up to a certain income threshold (similar to the current GIS income test). There was to be a middle range with no additional claw-back. High income seniors were to be subject to an additional 20% reduction rate (similar to the current OAS claw-back) (Baldwin, 2003). It was estimated that 75% of seniors would receive the same or better benefits under the Seniors Benefit, while 25% would receive reduced benefits. Nine out of 10 single women would receive higher benefits, since the majority of senior households with income under $20,000 are single women. The plan was projected to save 10.7% of program costs by 2030.

[33] It was since re-indexed in 2000.

The Seniors Benefit was unpopular among critics on both ends of the political spectrum. Even those that supported most parts of the proposed program argued that the income test was too steep. Additional income was to result in both a loss of a portion of the Seniors Benefit and an increase in personal income tax. This, some argued, would have detrimental effects on savings rates, employment and tax avoidance (Slater, 1998). However, if the claw-back were reduced in some way, the program would have become more expensive, perhaps defeating the purpose of the changes. The income test was also seen as an attack on the universal nature of OAS and its spirit of inclusiveness (Battle, 2003).

Women's groups were also against the Seniors Benefit. Because the Seniors Benefit would be based on a family income test, it was seen as taking away women's own-source income. It was also felt that there was not enough analysis of the proposal's impact on women. Furthermore, income increases for low-income seniors were seen as very small and the middle class felt attacked due to the lower income threshold for the claw-back (Battle, 2003). Overall, those from the political left argued that benefits were cut too much and those on the political right, along with those in the pension industry, argued that reduction rates were too high and would discourage savings (Baldwin, 2003). Some, however, did feel that the Seniors Benefit would have been fairer than the current OAS program (Battle & Torjman, 2000). The Seniors Benefit proposal was withdrawn in 1998.

CPP reforms

Significant CPP reforms were completed in 1997, which may in part have moved OAS reforms to a lower priority and allowed the Seniors Benefit to be abandoned. The withdrawal of the Seniors Benefit was linked to an improved government fiscal situation and economic growth, in addition to the financing and benefit changes planned for the CPP. The CPP reform removed two-thirds of the cost pressures facing public pensions (Battle, 2003).

Prior to the significant package of changes implemented in January 1998, there were various incremental changes to CPP, which began in 1966. In 1987, flexible retirement benefits were introduced for those ages 60 and over. Provisions for expansion of credit-splitting between spouses upon marital breakdown and sharing of retirement pensions also came into effect. In 1992, various changes were made, including implementing a new 25-year contribution rate schedule.

In 1996, the federal and provincial governments published a discussion report on CPP. It stated that CPP needed to be reformed in order to remain sustainable. Public opinion also demonstrated a widespread fear that CPP would not be around for future retirees (Battle, 2003). The Chief Actuary's report had stated that contribution rates would need to increase to 14.2% by the year 2030 (from 5.85% in 1998). Governments decided to implement changes on the benefit and investment sides of the program.

Contribution rates were increased over six years to a maximum of 9.9% and were to be used to build a larger reserve fund. The CPP went from a pay-as-you-go program to a partially-funded one. Eventually, five years worth of benefits are to be accumulated in the fund, which is now managed by the independent Canada Pension Plan Investment

Board. On the benefits side, some benefits were made slightly less generous. The year's basic exemption was also de-indexed, to remain at $3,500. These provisions were meant to decrease the growth rate of pension benefits.

GIS take-up rates

Administrative and incremental changes continue to be made to the OAS program. As mentioned, GIS payments are increased periodically, as in the 2005 federal budget. Also, recently, attention has been paid to the take-up rates for GIS. People have to apply separately for GIS by obtaining an application from Social Development Canada. Some seniors are notified of their eligibility (based on tax data) and sent partially completed applications for their signatures. If seniors apply late for GIS, they can receive up to 11 months of payments retroactively. Benefits are automatically renewed by filing a tax return. If no tax return is filed, a renewal application form must be submitted.

Various factors affect take-up rates of programs like GIS. There may be a stigma attached to applying for a payment targeted at low-income Canadians. Currie (2004) found that lack of information about a program may be a problem for poorer families, preventing them from applying. This could be an issue for single senior women, as well, who tend to have low incomes. Currie discussed factors that may aid in increasing take-up rates, which included automatic enrolment, higher benefit levels and increased availability of information.

A parliamentary task force probed into GIS take-up rates in 2001 (House of Commons, 2001). This was the result of growing concern about low take-up rates and

the fact that not receiving GIS can also affect eligibility for provincial supplements and subsidies. The task force found various sources of evidence of low take-up rates. An independent study of food bank users had found that only 15% of those that were eligible were receiving GIS. Human Resources Development Canada (HRDC) had been attempting to address the problem of take-up rates since 1993. HRDC had found that women make up a higher percentage of eligible non-recipients than men. The parliamentary task force determined that the application form was too complex and that many seniors do not file tax returns. It recommended that the printed material regarding GIS and the application be simplified. It also recommended an automatic eligibility notification process, more publicity for GIS and an increase in the retroactive payments available to seniors who apply late.

Given the unsuccessful reform attempts by both Conservatives and Liberals, a third attempt at substantial reform of the OAS program is highly likely (Battle, 2003). This research project, therefore, investigates the impact of incremental changes to the program.

C. Research on the Canadian retirement system

This section describes key research related to the Canadian retirement system. It concludes chapter 1 with a discussion of the ties between previous research and this project.

Kennedy (1989) uses the Lifetime Income Pension Policy Simulator (LIPPS) to perform longitudinal microsimulation to examine how marginal changes to CPP, OAS and GIS, along with associated personal tax increases, would affect income distribution

based on a lifetime income model. Kennedy examines increases to the OAS program and the related increases to personal income taxes required to fund them. Investment income is not included in his model, but detailed labour-force and earnings simulations are. He concludes that increases to OAS and GIS are progressive, based on lifetime income. This is largely due to the fact that they are funded through increases in personal income tax, which is generally progressive.

Prus (1999) examines intra-cohort income inequality over different stages of the lifecycle to determine the redistributive impact of the Canadian retirement system. He concludes that the Canadian system does redistribute income from the rich to the poor, as income inequality decreases as the cohort ages. Since the system is not highly correlated with employment history, and provides relatively high minimum benefits, those at the bottom of the income distribution benefit. In comparing the Canadian system to that in the U.S., Prus also concludes that a decrease in government involvement in the retirement system would lead to increased poverty and income inequality among seniors.

Gee (1999) shows that the majority of the baby boom generation has no private pension coverage and income level is the largest factor in determining whether a person is covered. She concludes that a large segment of the baby boom population will be reliant on public pensions.

Fellegi (1988) investigates the effects of an aging population on the three largest government expenditure categories: health, education and pensions. He uses three alternative demographic scenarios to project total population growth and dependency ratios. Two different cost projections are used to estimate future public pension costs. He concludes that if the economy continues to perform well and cost increases are

reasonable, these expenses will be affordable in 50 years. However, he also concludes that these demographic changes will require significant societal changes, such as the provision of more elderly care and altering the housing stock.

Using Luxembourg Income Study data, Smeeding and Sandstrom (2005) compare senior poverty rates in Canada, the United States, the United Kingdom, Germany, Sweden, Italy and Finland. They analyze how each part of a country's public pension system contributes to reductions in poverty. They stress that, though these countries have done well at reducing senior poverty, women living alone, especially those 75 and older, are still at high risk for poverty. They conclude that countries that have well-targeted programs with high take-up rates, like Canada, do better than others at reducing poverty among seniors. The inclusion of an income-tested benefit (like GIS) is crucial for lifting senior women out of poverty. However, they also note that, overall, divorced, widowed and never-married senior women have poverty rates more than twice that of seniors in general and that the proportion of the elderly that falls into these categories will be increasing.

This research project supports the findings of both Prus and Gee in that a large proportion of the senior population is shown to be reliant on public pensions. It also incorporates Fellegi's findings by not considering large public pension spending cuts. Kennedy's research was similar to this project in that it examined incremental changes to public pensions. However, this project uses cross-sectional data, which includes investment income, and looks at changing OAS in either a revenue-neutral way or by slightly decreasing total spending. Like that of Smeeding and Sandstrom, this research focuses specifically on the impact of OAS program changes on senior women.

Chapter 2 – Reforming Old Age Security: Drivers and Options

I. Drivers of Change

As introduced in chapter 1, various forces are involved in any discussion of public pension reform. The main issues at hand are demographics, income distribution and universality. These forces are driving the calls for reform in opposing directions. This section provides background and discussion of these issues.

A. Demographics and sustainability

In light of their aging populations, discussion about public pensions in industrialized countries has become urgent, and research in this area has been popular over the past 20 years. Most public pension systems were put in place in the first half of the 20th century and began to mature after WWII, with spending increasing dramatically in the 1960s and 1970s, along with government spending on social programs in general. The economic downturn of the late 1970s and early 1980s, growing deficits, and the aging population led to the re-evaluation of the sustainability of these plans.

Demographic projections

Felligi (1988) projects that by 2036, the proportion of the Canadian population over 65 will more than double and public pension costs per working age person will increase by a factor of between 2.5 to 4.0. CGA Canada describes a few recent demographic trends. In 2000, the baby boomers, who were considered middle-aged at the time, made up 33% of the population in Canada. Between 2001 and 2041 the

percentage of the population over 65 is expected to increase from 12.6% to 25%. These population changes, and the expenses that go along with them, could lead to intergenerational conflicts. Working age Canadians will see a larger portion of their incomes going towards care of seniors. Hamilton (1999) notes that tax revenues may fall in the future, as the senior population, who have lower incomes than working age Canadians, increases in proportion. Some argue that this could be mitigated by allowing higher-income Canadians to save more for retirement.

Researchers use dependency ratios when examining and predicting the effects of population changes. The total dependency ratio is usually calculated as the total population under 20 and over 64 divided by the population aged 20 to 64. This estimates how many dependents there are per working age person. This ratio has been decreasing since the end of the baby boom, as birthrates have been declining. So far, the increase in elderly members of the population has been offset by a decrease in the number of children. However, this will begin to change around 2010 as population aging becomes a stronger force than low fertility rates (Fougere & Merette, 1999). This calculation assumes retirement at age 65. However, some people choose to work after age 65 (if not bound by mandatory retirement rules) and some people choose to retire many years before reaching age 65. This issue is discussed later in this section.

The question of how high the dependency ratio will get before it peaks is debatable. Fougere and Merette (1999) look at two different scenarios. On an unadjusted basis, the dependency ratio reached in 2050 will be high, but not higher than the peak that was reached in 1965. However, when the ratio is adjusted for the higher consumption needs of older people versus younger, then the level that will be reached in

2050 will be higher than the previous peak in 1965. Other research claims that though the public costs for caring for the elderly are higher than those required for caring for children, the total costs are about the same. Therefore, these demographic shifts may require a transfer of private savings to public expenditures (Binstock & George, 1996).

Affordability

Whether or not these projected increases are "affordable" is another issue. As Battle (2003) states regarding the Seniors Benefit plan, cost is different from affordability. Some argue that it is a matter of prioritizing spending and ensuring taxation levels are adequate. European countries are held up as examples of how this can be done (Finn, 2002). In 2001, Canada spent only 17.81% of its GDP on social programs, including public pensions, compared to the OECD average of 21.20% (OECD, 2005). If no changes are made to the public pension system, 9.1% of GDP will go towards paying for it by the year 2040, which will still be lower than in many OECD countries (Gee, 1999). In addition, average government transfers as a percent of median income are relatively low in Canada compared to OECD countries (Atkinson et al., 1995).

Gee (1999) argues that the large size of the baby boom generation is being used as an excuse to reduce public pensions, when in fact demographic changes may not cause that large of a cost increase. She states that the focus needs to move towards the distributional problems of the pension system. Battle (2003) argues that the media and the government's opposition convinced Canadians in the 1990s that public pensions were not sustainable in the long-run, when in fact increases in costs would not cause a

"doomsday" scenario. However, there is no doubt that as the population ages, the OAS program will require a larger proportion of government revenues and will become more susceptible to cuts (Baldwin, 2003).

As seniors comprise a larger and larger proportion of the population, they may exert more influence on politicians, and hence their public pension coverage (Fellegi, 1988). Ruggeri, Van Wart and Howard (1995) remark that as baby boomers age, their political influence will change direction, away from decreasing government spending. Pampel and Williamson (1985) show that once public pensions are established, the percentage of the population that is elderly has a significant impact on pension expenditure increases. They also conclude that a country's age structure has more influence on pension expenditures than class structures or class politics. They state that more research is required into what influences the *distribution* of pension expenditure, as opposed to the total amount.

Retirement age

A discussion of public pension reform and demographics would not be complete without mentioning the retirement age. The question of whether eligibility should be changed from 65 to 67 or 70 is an issue that ties to many different areas. People are retiring earlier, yet there is a push to abolish mandatory retirement (Fellegi, 1988). A recent study published by Statistics Canada (2005c) found that 60% of people who retired during the 1990s would have kept working had circumstances been different, including 24% who were forced to retire due to health or other reasons. Twelve percent of retirees said they would have kept working if not for mandatory retirement and alternative work

arrangements, such as part-time work, would have encouraged about 28% to not retire (Statistics Canada, 2004b). The average retirement age for both men and women has been steadily decreasing since 1976, from about 65 for men and 64 for women to about 62 for men and 60.5 for women in 2002 (Statistics Canada, 2005e). Improved public pensions may be affecting earlier retirement trends. As Pampel and Williamson (1995) point out, public pension levels may affect retirement levels by making retirement more attractive, and the opposite may also be true. That is, as the retired population increases, it creates political pressure to increase public pensions.

Reforming public pensions to increase the eligibility age would address cost concerns, but not the poverty and distributional issues. People are living longer, healthier lives so it may make sense to encourage them to work longer. However, public pensions, especially OAS, may serve to actually increase incomes for low-income people. (See Table 11 in chapter 3) If eligibility ages were increased for these people, then they may remain in extreme poverty for a longer period, thus exacerbating the problem. Though increasing the retirement age is a possible reform option, it is not included in the policy options explored in this project, which are described at the end of this chapter. This reform would not address the income distribution and poverty issues that are the central themes of this paper. It is interesting to note that the 1998 overhaul of CPP did not involve changes to eligibility ages. This may be a signal that this would not be a viable option in OAS reform either.

Other costs

Demographic trends will also affect healthcare and other program costs. If cutbacks are made in these areas, the well-being of seniors could be adversely affected. Also, declines in fertility over the last three to four decades will mean that there are fewer family members available to care for seniors in their old age (Fellegi, 1988). However, early retirement trends could mean that those retirees will have time available to care for elderly parents.

B. Income distribution and poverty

Overall, poverty rates among seniors are actually lower than rates among the population as a whole (Picot & Myles, 2005), but there are high rates of poverty among certain groups of seniors. According to Prus (1999), this signals that some seniors have not been affected by the post-WWII economic boom, pension system improvements or increased incomes. This perspective does seem to be supported, since many seniors continue to rely on OAS and GIS in retirement and, though they have been improved over the years, these programs do not provide enough income to lift many, especially single women, above the LICO. Poverty causes unique problems for seniors, since it is mainly a result of past labour market decisions and outcomes and they cannot escape it very easily (Osberg, 1981).

Though the economic circumstances of Canadian seniors have improved, there are still significant income distribution issues. A large portion of the senior population is low-income and relies heavily on public pensions. Public pension plans account for more than half of the income received in the lower six deciles of the income distribution for

seniors. Only seniors in the 10th decile receive less than 30% of their incomes from public pensions. Senior women, especially, are at risk of having inadequate incomes in retirement (Baldwin, 2003). Prus (1999) concludes that "income inequality is a significant problem in later life."

Vertical equity

Vertical equity is the distribution of taxes/transfers based on people's ability to pay. It implies that those with higher incomes should pay a larger proportion of tax and receive a smaller proportion of transfers. Those with lower incomes should receive a larger proportion of the benefits of government transfers and pay a smaller proportionate share of taxes. Musgrave (1990) states that, though the concept of horizontal equity is generally supported, vertical equity is more controversial. This is because, though most people can agree that equals should be treated as equals, each person in a society has a different idea of how to differentiate between people. In order to determine who should bear the larger burden of the tax/transfer system, this differentiation must occur.

Ability to pay is usually used as the differentiation tool. However, as discussed in chapter 1, it is a difficult concept to define. Using annual income may be a good way to measure vertical equity because it is objective and more easily measured. Lifetime income may also be a good measure since it is more comprehensive and annual income fluctuates from year to year. An approximation for lifetime income would be the sum of each year's consumption. People tend to consume based on expected earnings and annual consumption is more constant over a person's lifetime than annual income. Kesselman (2000) points out that some people see consumption taxation as violating the

principle of vertical equity. Those with higher incomes can save more and therefore exclude a larger percentage of their income from current taxation.[34]

Much taxation analysis uses the lifecycle framework when defining income. This would require lifetime income to be estimated for each individual, as well as lifetime taxes and transfers. Under this approach, OAS could be analyzed in the context of the taxes individuals paid during their working years. Assuming taxation is generally progressive, those who earned higher incomes would be shown to receive less of a benefit in their retirement in relation to the taxes they paid. An analysis of the OAS system done in this way would show higher vertical equity than one using an annual income approach. However, since OAS is paid for from general tax revenues, it would be difficult to determine which taxes to attribute to its funding. Kennedy (1989) includes both the benefit payment and the income taxes over the lifecycle in his analysis of OAS, GIS, and CPP in order to determine whether they are progressive or regressive overall. Kennedy assumes that public pension benefits are paid for with personal income tax revenues.

Lifecycle framework

As previously discussed, annual income or lifetime income could be used to assess vertical equity and the distribution of income. The lifecycle framework is commonly used by economists to develop models of the allocation of consumption (and other things) over the lifetime. The framework is based on the idea that people smooth out consumption over their lifetimes based on their expected lifetime income and

[34] He also states that consumption taxation could be regarded as increasing horizontal equity since those with the same lifetime income, but different preferences for current and future consumption, would pay the same amount of tax (assuming all lifetime income is consumed, and therefore taxed, before death).

independent of annual income changes. Browning and Crossley (2001) state that "the broad theme of the life-cycle framework is that people seek to smooth their marginal utility of consumption" (p. 27). In other words, people want to derive roughly the same personal benefit and satisfaction from consumption every year (but the total amount of consumption is not the same every year). In the beginning of their adult lives they will borrow in order to consume more than their incomes allow, in the middle they will save, and at the end they will dissave in order to meet consumption preferences.

Browning and Crossley (2001) point out that, though the lifecycle framework can be used to develop a multitude of models that are supported by data, there are some phenomena that it has difficulty explaining. For example, people with similar lifetime incomes retire with very different amounts of savings. Additionally, consumption has been shown to decrease after retirement. Both of these examples suggest that people are not actually smoothing consumption over the entire lifetime. Additionally, evidence shows that retirees do not dissave as much as the lifecycle framework would suggest. These points are not meant to invalidate the lifecycle framework, but merely show that the framework is complex, with many factors coming into play, including behavioural aspects and individual preferences. Therefore, using the lifecycle framework to assess vertical equity is not as easy and attractive as it may seem. In addition, all people cannot necessarily save and borrow to smooth out consumption over their lifetimes (Rosen et al., 2003). Some people are credit-constrained.

Since most seniors are out of the labour force, full, or potential, income measures are not as important when performing a point-in-time analysis. Annual cash income can be used for the analysis. This is an objective and concrete figure and can be seen as one

part of the distribution of total income.[35] Since OAS is not funded, and it is paid for from current government revenues, both the incidence of the tax and the benefit can be examined by using after-tax income in the current year. Like Kennedy's, this study assumes that OAS is paid for with personal income tax revenues. However, unlike Kennedy's study, the policy options explored in this study generally do not involve altering total government revenues.

Income distribution

There is no absolute standard against which to judge the current income distribution. Everyone likely has different preferences for income distribution. Monitoring the distribution over time and examining changes is useful (Love, 1979). However, most people would probably agree that reducing the number of individuals or families living in poverty would be a good idea. In fact, it is one goal on which diverse special interest groups have been able to agree (Guest, 1985; Battle, 2000). Given the current situation of single senior women, and the fact that there will be more of them in the future (Binstock & George, 1996; Gee, 1999), it is increasingly important to address poverty for that group.

Osberg (1981) compiled a picture of the distribution of income in Canada in 1981. He found that wealth and economic power are highly concentrated in Canada. The distribution of total income may be even more unequal than annual cash income, since property income is often unreported and accrues mostly to higher income people and wealth is more unequally distributed than income. Osberg found a correlation between

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[35] It has been shown that the distribution of income is related to the distribution of well-being (Love, 1979).

wealth and annual income. When wealth or capital gains were included, inequality increased. Lifetime income was only slightly more equally distributed than annual income. Inequality decreased slightly when government taxes and transfers were included in the model. Based on Osberg's results, this study can obtain meaningful results by using annual cash income, instead of wealth or lifetime income, in the analysis. It may even understate inequality.

Public pensions serve some redistribution objectives. They redistribute income from working years to retirement years and from workers to seniors. However, Osberg (1991) explains that people tend to react to the availability of public pensions and these reactions may offset their redistributive impacts over the lifecycle. Annual income, generally used to measure income distribution, reflects past choices people have made, given the institutions affecting them, and the labour decisions made by employers, given the taxes they are required to pay. Income also does not fully measure economic well-being. The overall redistributive impact of public pensions may therefore be uncertain. Over a lifetime perspective, OAS may be progressive. Higher income individuals pay more taxes and these taxes fund OAS. In fact, this was the original idea of the Joint Commission on Old Age Security in 1950 (Kennedy, 1989).

OAS may also serve an income smoothing purpose. People are taxed in higher income years and then receive OAS in the lower income retirement years. This helps to smooth out consumption over peoples' lifetimes, which is seen to make them better off. However, higher income people are already doing their own income smoothing by contributing to RRSPs, private pensions, investments and savings. They may not need the extra assistance of government income smoothing programs like OAS.

Gini coefficient

The Gini coefficient is one of the most commonly used measures of income inequality. It ranges in value from 1 (signifying perfect inequality, or one unit holds all the income) to 0 (signifying perfect equality, or each unit shares the income equally). The Gini is derived from the Lorenz curve, which plots the cumulative share of income against the cumulative portion of the population (Osberg, 1991). Relative to other income equality measures, the Gini is most sensitive to changes around the middle of the distribution (Love, 1979). According to Erksoy, Osberg and Phipps (1995), policy changes significantly affected the distribution of income when the Gini coefficient changed by .01. Changes of .001 were not considered significant.

Love (1979) found that the Gini coefficient for economic families headed by seniors 65-69 was .4810 and those headed by seniors 70 and over was .4872. The Gini coefficient increased consistently with the age of the head of the family, starting with families headed by a 25-34 year old. Young people tend to have few assets and lower incomes, so incomes are more similar among this group. As people age, some people get better jobs and promotions and earn higher incomes. Other people remain in low paying work, or may never work. This causes the income differences to increase as a cohort ages. The Gini for seniors reflects cumulative life experiences, since retirement income is generally comprised of investment and pension income. Improvements in the economic well-being of seniors in the last two decades since Love's report have likely changed this situation. The Gini for seniors has decreased, since improved public pensions have raised incomes in the lower deciles of the income distribution.

Table 4 shows how the Gini for seniors in Canada compares to other countries. Income is distributed more equally among seniors in Canada than in the US and the UK, but not as equally as in Sweden.

Table 4: Comparative Gini coefficients, family heads over 65

Country	Gini
Canada, 1994	.240
U.S., 1994	.372
U.K., 1995	.287
Sweden, 1995	.191

(Prus, 1999)

However, overall, income inequality increased in Canada in the late 1990s. From 1990-2000 the Gini coefficient increased by 6 percentage points, which was mostly due to higher incomes at the top of the income distribution (Picot & Myles, 2005). Table 5 shows comparative Gini coefficients measured using the entire population. Again, Canada's Gini coefficient is lower than in the U.S. and U.K., but higher than in Sweden.

Table 5: Comparative Gini coefficients, late 1990s

Country	Gini
Canada	.29
U.S.	.37
U.K.	.35
Sweden	.25

(Picot & Myles, 2005)

Poverty

There is no official poverty line in Canada. Poverty measures can be relative or absolute. Relative measures are based on the distribution of income and can only be

improved by reducing income inequality. Absolute measures are not tied to the distribution of income and are improved by increasing incomes in real terms (Osberg, 1991). Absolute measures entail the calculation of a basket of basic needs. The questions of what should be included and at what cost are highly debatable. In opinion polls, people have been shown to relate poverty to median incomes, implying a relative measure (Osberg, 1991). Most poverty lines used in other countries are around 25% of average income (Osberg, 1981).

Statistics Canada publishes relative measures of low incomes called Low Income Cut-Offs (LICOs). The LICOs are calculated based on the Family Expenditure Survey and vary by 7 family sizes and 5 community sizes, creating 35 measures. Each LICO is calculated by first plotting spending on basic food, shelter and clothing as a percentage of income against income for each of the 35 family types. To determine the typical relationship, a regression line is fitted to the data and the average amount of spending is determined for each family type. Twenty percentage points are then added to this average to determine the point at which families are spending significantly more on food, shelter and clothing than the average family (Giles, 2004). The income level that corresponds to this percentage is the LICO for that family type. Low-income status is then determined by comparing a family's income to the corresponding LICO and is not related to the spending patterns of that family. Separate before-tax and after-tax LICOs are calculated, but Statistics Canada recommends using the after-tax measures since they include all income taxes and transfers. Though it is emphasized that these measures represent low income, and not poverty, they are often used to identify those living in poverty or at risk for poverty.

Some caution against using the LICOs. Since LICOs are relative measures, they do not take into account increases in the standard of living over time, or in general. Though Canadians are spending a smaller portion of their incomes on food, shelter and clothing, low income rates based on the LICOs are not improving. Furthermore, the 20% used by Statistics Canada to calculate them is arbitrary (Bureau of Statistics). The measure also ignores differences in costs of living between different cities of the same size (Sarlo, 1998).

An absolute measure of poverty in Canada is the Market Basket Measure (MBM), which was first introduced by Human Resources Development Canada using 2000 data. It was meant to complement LICOs and Low Income Measures (also published by Statistics Canada). The cost of a specific basket of goods in 48 geographical areas was calculated. This was then compared to families' disposable incomes. Low income incidence using the MBM is similar to, but not the same as, that calculated by LICO (HRDC, 2003, National Council of Welfare, 2003).

The difference between poverty and low income is unclear. Some believe poverty is a "state of serious deprivation" and that the LICO measures are too high (Sarlo, 1998). Others believe that poverty means living in "straitened" circumstances, which was the original basis for the LICO measure (Bureau of Statistics). The National Council of Welfare (2003) stated, "All poverty lines are relative and all of them are arbitrary," and stressed that the debate needs to move away from how to measure poverty and towards how to reduce it.[36] In other words, though different thresholds may lead to slightly different measures of poverty, one can still examine changes in poverty by looking at one

[36] Smeeding and Sandstrom (2005) note that many northern European and Scandinavian countries do not calculate poverty rates because their programs lead to low poverty using any reasonable measure.

measure (or various measures) consistently over time. The ongoing debate about poverty measures may be taking resources away from poverty reduction initiatives, when in fact most people may agree that poverty is too high.

There is no "perfect" poverty measure. Both relative and absolute measures have their benefits and drawbacks. Because of the subjectivity of the issue, the approach taken in this project is to use a widely-accepted and well-known measure which indicates a level of reduced circumstance, the after-tax LICOs, which is quite acceptable for point-in-time analysis. When performing marginal analysis, the measure used is not as important as the changes generated. Furthermore, relative measures are usually used when doing international comparisons (Smeeding & Sandstrom, 2005) which will be useful to others who may want to use the results of this study.

C. Universality

Universality is an important Canadian value. Many argue that OAS should be a universal program in order to minimize behavioural effects[37] and to maintain broad public support. Battle (2003) suggests that universal OAS is seen as a way to maintain social solidarity and repay seniors for their contributions to society. However, he also argues that universal programs are more susceptible to cuts and that the public tends to support reforms that increase progressivity. When OAS was enacted, a large percentage of seniors were living in poverty. Now, many seniors are better off and would be well off even in the absence of OAS transfers. Therefore, the justification for the universality of OAS is currently less compelling. As Woolley, Vermaeten and Madill (1996) point out,

[37] If OAS is not universal, and is instead income-tested, then people may change their savings and/or employment behaviour in order to maximize their OAS receipts in retirement. If OAS is a demogrant, then everyone receives the same amount and it will not change behaviour.

universal programs are under scrutiny and political will is changing in favour of more "targeted" programs. When this happens, however, some people are left with no benefit and no recognition for their contribution to society.

Horizontal equity

If OAS is not to be universal, the question arises of how to determine who should receive the benefit. The principle of horizontal equity states that equals should be treated equally by the tax/transfer system (Woolley et al., 1996). Generally, a measurement of income is used to determine equals. Those with equal incomes should receive an equal proportion of the benefits/costs of the tax/transfer system. When applying this principle, the unit of analysis is very important. If done on an individual basis, it may be more straightforward to determine equals, based on a measurement of income. When comparing families, however, it becomes more difficult to determine "equals". The issues of actual versus potential income and unpaid household production become important.[38]

Kesselman (2000) argues that it is difficult to compare "ability to pay" between families. One-earner and two-earner couples with the same total income may not have the same level of well-being, given that the former generally has the advantage of household production. Furthermore, Musgrave (1990) points out that when behavioural effects of taxation are considered, equals become even more difficult to define. People react differently and their incomes change, even if they started from the same theoretical "place."

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[38] Seniors do not generally engage in paid labour, so comparing senior families is a bit less complicated. Statistics Canada (2004c) reports that approximately 8.4% of seniors worked in 2001. However, this percentage will likely increase.

Income testing

The opposite of a universal benefit would be one targeted at low income seniors. Targeting of OAS can be achieved through income testing either based on individual income or family income. This is currently done with an individual income test. Those with incomes above $60,806 receive reduced OAS. Family income testing could increase horizontal equity among seniors. Families (or couples in this case) with the same total income would receive the same amount of OAS, regardless of how that income is divided between the members. Families with equal ability to pay, measured using annual combined income, would receive equal benefits from the tax/transfer system.

However, some argue that family income testing will harm low-income senior married women by reducing their own-source income. Women with little or no retirement income would not receive OAS (or would receive reduced OAS) if their husbands' incomes exceeded the income test threshold. In fact, women's groups used this as an argument against the Seniors Benefit (Battle, 2003). Apps and Rees (2003) explain that some advocates of individual taxation, or individual income testing in this case, feel that it is part of giving women equal rights.

Family income testing may be considered a move towards family, or joint, taxation. Family taxation discourages the secondary earners (usually the females) from working, since they face a higher marginal tax rate, and does not recognize the value of household production (Gagne, 2001). Apps and Rees (2003; 1999) argue against joint (family) taxation on the grounds of horizontal equity. Since female labour supply varies dramatically across households, it is difficult to compare couples in order to determine horizontal equity. Depending on the amount the female works, tax burdens can be quite

different. Without a value to assign to household production, it is impossible to ascertain whether households in which women work outside the home are equal to households with the same total income in which the women does not. Therefore, household income may not be a good measure of household welfare. Apps and Rees (2003) note that an argument for individual taxation can also be made on efficiency grounds. Since females have higher labour supply elasticities than men, they should be subject to different tax rates.

Kesselman (2000), however, generally supports joint taxation because it could increase horizontal equity by equalizing marginal tax rates between one-earner and two-earner families. He also points out that one-earner couples may not be better off if one spouse is at home not out of choice, but because paid work was not available. Also, a one-earner couple could be seen as a team working together for one salary. He also acknowledges that couples can achieve economies of scale. Joint filing may also increase other aspects of horizontal equity because some Canadians, such as the self-employed, are able to split income under the individual taxation system, while others cannot.

Given the fact that seniors generally do not face the labour supply issues discussed by Apps and Rees, a move towards family income testing may not cause these horizontal equity and efficiency issues. An approach more like that employed in the pre-1980s, when female labour supply was not considered, may be more applicable. Horizontal equity was seen to be maintained by imposing a lower tax burden on a family, since the income had to support more people, than an individual with equal income (Apps & Rees, 2003). In addition, other programs targeted at low income earners, such as the

GST credit, GIS, social assistance and some income tax credits, already use family income measures.

Targeting

As support for a move away from universality towards targeting grows, the question of how to target the spending must be addressed. The income test could be increased by reducing the income threshold (either based on individual or family income) to reduce benefits paid to higher income seniors. The reduction rate could also be increased. Alternatively, or in conjunction, payments to lower income seniors could be increased through the GIS payment.

Ianno (2004) identifies three main issues involved in increasing GIS payments to address senior low income issues. The first issue is sustainability. An increase in annual GIS payments of $1,200 per person in 2005 is estimated to increase program costs by 4%, or $1.3 billion. This increase would still not raise many seniors' incomes above the LICO level. Second, there is an equity issue as seniors living in rural areas face differing costs of living than those living in urban areas. If GIS payments are the same across Canada, then recipients living in rural areas may have incomes above the low-income measure for their area, while those living in large urban areas do not.[39] Lastly, there is concern about how this increase would actually impact seniors' incomes given the interaction of current policies and benefits. The research undertaken in this project will model these interactions by including all aspects of the tax/transfer system. Ianno's report recommends a one-time increase in GIS to reflect growth in wages since 1985.

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[39] However, if GIS payments are adjusted for the cost of living of different regions, the government may be seen as subsidizing people who live in high cost cities.

Another recommendation in this report is to allow seniors to earn up to $4,000 in employment income annually, without affecting GIS receipts.

II. Policy Options

This section describes the three policy options that are examined in this project. They are simulated using the Social Policy Simulation Database and Model, which is described in detail in the next chapter. An examination of research surrounding the drivers of change and the current economic situation for Canadian seniors should inform the development of policy options for reforming Old Age Security. The following is by no means an extensive list of the possible options for reform. However, these options cover some of the main themes identified.

Other themes discussed in the previous section are not explored by simulating policy options. For example, increasing the eligibility age for OAS is not investigated. It is not believed to be a feasible option at this time, especially since it was not included as part of the CPP overhaul in 1997. The retirement age is a complex issue that also involves mandatory retirement and private pension plan provisions. Furthermore, it does not address poverty among single senior women.

Another option that is not explored is an increase in total government spending[40]. This is not considered to be a viable option given future demographic trends. However, as the federal government's fiscal situation continues to improve, this may become a possibility. Slight decreases in government spending are modeled in Option 1C and Option 3. This decrease could be used to offset increases in spending for an aging population or could be allocated to other programs for seniors (healthcare or GIS, for example).

Given the failure of the Seniors Benefit in 1996, it is not believed that a major change to OAS is currently possible. Incremental changes are more feasible. Therefore,

[40] Option 1A briefly addresses an increase in government spending as it relates to a return to universality.

the primary options investigated are a return to universality, increased targeting and changing to a family income test. All of these could be explored in conjunction with increases or decreases in government spending, which would accentuate their impacts on poverty and income distribution. Examining the effects of these options may lead to further ideas and possibilities. It should also provide conclusions to be incorporated into future reform discussions.

A. Option 1: A Return to Universality

The first policy option to be investigated is a return to universality. The OAS program was originally intended to be universal in order to, among other reasons, eliminate the stigma attached to receiving income support. Universal OAS has also become symbolic. Canadians tend to feel a sense of entitlement to the payment. A return to universality may also decrease any negative incentive effects on savings and labour decisions caused by the claw-back. Universality is analyzed by eliminating the claw-back in three different scenarios:

A) Keep current individual OAS payment levels, which will then increase OAS total spending.

B) Keep current OAS total spending level by reducing individual payment levels.

C) Reduce current OAS total spending level by further reducing individual payment levels, in anticipation of future demographic stresses.

Option 1A is examined briefly, but it is not believed to be a viable option. There is no political appetite for increasing spending on OAS in this manner. Option 1B is a more realistic option, since total program spending remains constant. However, given the

demographic changes Canada is facing, Option 1C may be the most realistic under this scenario. None of these options involve any changes to current GIS payments.

B. Option 2: Increased Targeting

The second policy option to be examined is an increase in the targeted nature of the OAS/GIS program. This involves increasing the OAS claw-back and allocating the savings generated to GIS payments. The following scenarios are modeled:

A) Increase the claw-back (i.e., reduce the income threshold), which reduces total spending levels in anticipation of future demographic stresses.

B) Increase the claw-back, as above, but maintain current total spending levels by reallocating savings to GIS payments.

An attempt is made to link the claw-back income threshold to a reasonable income level. Incomes levels based on the YMPE (the CPP Year's Maximum Pensionable Earnings) and LICO are investigated.

C. Option 3: A Family Income Test

The third policy option to investigate is a change from an individual income test to a family income test. This would reduce the number of recipients of OAS and reduce total spending. The savings could be allocated to GIS, as in Option 2 above, though this is not modeled.

Chapter 3 – Analysis of Policy Options

This chapter describes the analysis performed as part of this project. It begins with a description of the Social Policy Simulation Database and Model, which was used to simulate the policy options developed in chapter 2. The next sections describe the research method, the results and their limitations.

A. Social Policy Simulation Database and Model

Analysis of the identified policy options, described in the previous section, is done using the Social Policy Simulation Database and Model (SPSD/M) created by Statistics Canada. This microsimulation model is comprised of 100,000 representative Canadian individuals, or records, and calculates taxes and transfers. It was created using four sources of microdata: the Survey of Labour and Income Dynamics, personal income tax returns, unemployment insurance claim histories and the Family Expenditure Survey. Each record in the database includes demographic, income and tax related data. Individuals can be analyzed within their family contexts. Each record is assigned a weight so that the total database approximates the Canadian population by age, sex and province. The database excludes certain populations, such as those living in the territories and on reservations and those confined to institutions.[41]

The SPSD/M was developed specifically for the purpose of analyzing changes in taxes and transfer payments. Each portion of the tax/transfer system is separated so that

[41] 92% of seniors lived in private households in 1991 (Statistics Canada, 1999)

altering a single program and examining the effects is accomplished more easily.[42] Using this model is an ideal way to examine changes in the OAS system. The SPSD/M is flexible enough to allow analysis of small changes to parts of the OAS system and how they would affect subgroups of the population. It also allows for the analysis to include the interaction of all parts of the tax/transfer system. The aggregate change in government spending based on program changes can also be calculated.

The current version of the SPSD/M is based on 1998 microdata. This data was benchmarked to actual published figures for that year, such as wages and salaries, income taxes and reported investment income. Wages and salaries are the most important income figures and are benchmarked very carefully. Other variables are usually within 5% of other published data sources. Some adjustments are made to force agreement with, for example, population figures, the number of high income Canadians and total welfare expenditures and number of recipients. However, there are various data sources available for "verification" of numbers and those sources do not usually agree. This is due in part to reporting problems. Many elderly, especially, do not report age correctly or distinguish between GIS and OAS payments accurately (Brian Murphy, Manager SPSD/M, Statistics Canada, personal communications, 2005). It is important to remember that the SPSD/M is a simulation model that represents reality but, like most measurements, is not 100% accurate. Furthermore, the research undertaken in this paper is an analysis of changes, or marginal analysis. The exact starting values are not as important as the changes generated under each option. As Kennedy (1989) remarks about using LIPPS, "It must be recalled, however, that the objective is to analyze pension policy, not to create a comprehensive model of socio-economic reality" (p. 239).

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[42] For a full description of the SPSD/M, see Bordt et al. (1990)

The SPSD/M is comprised of a database and a model for each year. The database contains statistically representative individual records. The microsimulation model contains a set of algorithms representing the tax/transfer system. The model processes each individual, calculates the taxes and transfers and reports the results. There are 800 tax/transfer parameters that can be changed by the user through a user dialogue. Results are reported via output variables, to which demographic weights are applied, that are aggregated together to obtain estimates.

Analysis in this project is completed using version 10.1 of the SPSD/M. The 2004 database and tax/transfer parameters are used for all analysis. The 2004 projected values are derived from the 1998 actual values.[43] Database adjustment algorithms are applied to the records during the simulation to represent the year chosen by the user. The 2004 tax/transfer parameter values are based on 2003 actual tax/transfer parameter values and the 2004/2005 federal and provincial budgets. It is felt that the analysis is more meaningful if it is based on the most up-to-date information, even if some of it does include projections.

Other SPSD/M research

The SPSD/M has been used in various ways to analyze the tax system. The introduction in 1993 of the Child Tax Benefit, and its distributional impacts, was analyzed by Woolley, Vermaeten, and Madill (1996). Microsimulation was used in order to deal with the complexity of the reform and to determine the widespread impacts on Canadian families. They determined that incorporating behavioural responses into the

[43] These projections are based on economic growth projections from the Department of Finance Canada.

analysis would have had very limited benefit. Erksoy, Osberg and Phipps (1995) use the SPSD/M to analyze potential changes to the unemployment insurance program and their effects on income inequality.

Vermaeten, Gillespie and Vermaeten (1994) used the SPSD/M to study the distribution of taxes in Canada and whether the overall system is progressive or regressive. They concluded that tax incidence should be based on the current year and not on a lifetime basis because taxpayers are mostly interested in assessing their current economic condition. The results of their study showed that only the federal tax system is progressive and that personal income tax is the only type of tax that is not regressive. Ruggeri, Van Wart and Howard (1994) used the SPSD/M to arrive at different conclusions about tax incidence. Although they found that the federal tax system redistributed the most from high income to low income Canadians, due to its reliance on personal income taxes, they concluded that provincial systems were also progressive and local systems were flat. The difference in the results of these two studies was due to differing measures of income and different methodologies.

Fougere and Ruggeri (2001) analyzed three different revenue neutral personal income tax changes using the SPSD/M. They looked at the distributional impacts among each of the ten provinces by using the current distribution of the tax burden as the starting point. An option was considered bias-free if the provinces' share of the personal income tax did not change. Ruggeri, Van Wart and Howard (1995) attempted to predict how people would vote on deficit reduction plans based on effects generated from the SPSD/M. They determined that baby boomers are relatively well off and generally

would oppose tax increases, in favour of decreases in government spending, including services and transfer payments.

B. Research method

The following section provides an outline of the research method used in this study and a description of some of its main components. A discussion of the unit of analysis, the definition of income, assumptions related to OAS spending and income distribution analysis tools are included. This part concludes with a detailed description of the status quo situation for seniors. This status quo can then be used as a base case for comparing policy options.

Unit of analysis

The main unit of analysis used in this project is the nuclear family. Family living situations used in the SPSD/M are taken from the Survey of Labour and Income Dynamics. A nuclear family is defined as an individual and spouse, plus children under the age of 18, living together. A nuclear family of one consists of a person living without a spouse or children under 18. The nuclear family was chosen in this study because it reflects the usual way that Canadians share their economic resources. Extended family living situations are not very common and the extent of sharing of economic resources between family members is uncertain.[44] A brief discussion of the living arrangements of Canadian seniors is included in chapter 4. There is little research or analysis available regarding the sharing of income within families and the assumption that families share the resources they have for consumption is not always correct (Osberg, 1981).

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[44] Only 8% of seniors lived in an extended family in 1991 (Statistics Canada, 1999). This says nothing conclusive, however, about the extent of sharing within those extended families.

Although the extent of sharing among extended family members is uncertain, this project assumes that resources are shared between spouses. Using the individual as the unit of analysis would not capture this. A couple may contain one spouse with a low income and one with a high income. It would not make sense to compare this low-income spouse with a low-income single person. Using the nuclear family as the unit of analysis captures both singles (nuclear family size of one) and couples (nuclear family size of two). In this project, nuclear families of two are assumed to be married couples[45] and, given that most seniors do not have children under 18, nuclear families greater than two are not considered in order to simplify the analysis.[46]

Income

The analysis could be completed using total income, disposable income, or consumable income. Total income is comprised of market income and transfer income and is an understandable and comparable concept to many people. When people discuss how much a person earns per year, they use before tax figures. Very few people know what their own after-tax income, or disposable income, is. However, total income is clearly not a suitable value to use when analyzing the effects of the tax/transfer system on people's economic welfare and purchasing power. Consumable income is an after-tax income figure that, in addition to income taxes, takes into account commodity taxes, based on expenditure patterns. Consumable income is a difficult concept to grasp and varies depending on expenditure patterns and living situations (which can be modeled in

[45] Over 99.8% of 2 person nuclear families with family heads over 64 included in the SPSD/M are married couples.

[46] Of the families headed by a senior included in the SPSD/M, 1% contain more than two people and are excluded. See Table 7.

the SPSD/M). Disposable income is used in this analysis because it is a comparable figure, which takes into account the entire income tax and transfer system. It measures the income people have to bring to the market and is a good proxy for economic well-being.

OAS program spending

Analysis of the OAS program includes both OAS and GIS. It is assumed that these transfer payments are paid for out of personal income taxes. Some of the policy options described in section III of chapter 2 entail a reduction in OAS spending. It is assumed that this saving will not result in lower personal income tax, or other tax, rates. Current sustainability arguments state that public pensions will become unsupportable at current tax levels. Therefore, these options will investigate the reduction of program costs that will be required in order to maintain current tax levels. Some savings generated may need to be transferred to other spending areas, such as healthcare. Other policy options are revenue neutral. In these cases, savings in OAS are allocated to GIS payments, so personal income tax rates (or other taxes) do not need to be adjusted.

Income distribution

It may seem obvious how certain policy options will affect the income distribution. However, without the SPSD/M, we cannot see how the interaction of all parts of the tax/transfer system will affect the results.[47] It is also necessary to measure

[47] There are also interactions between OAS payment levels and GIS. For example, the GIS top-up for partial residents is based on OAS payment levels.

the magnitude of the effects. The primary question to answer is: What are the distributional impacts of the identified policy options?

The SPSD/M is used to analyze each policy option and determine its effect on income distribution, poverty rates and total program costs. The income distribution among seniors under the various policy scenarios is compared to the status quo situation. The Gini coefficient is calculated for each policy option. The lowest income groups are compared to LICO measures to determine how many people would be living at or below the poverty line. Also, people are separated into deciles to determine who the "winners" and "losers" are of the various options. The analysis focuses on the outcomes for single senior women.

Most results are examined using two reports generated by the SPSD/M. The first is an income distribution report. It reports the Gini coefficient for the selected group of individuals and the income percentiles, based on the requested income measurement (i.e. disposable income). The income percentiles can then be used to generate an income deciles chart. As discussed, disposable income is generally used in this study. The second report frequently used is one that divides the specified group of individuals into income groups based on multiples of the after-tax LICO measure. This report is used to determine what percentage of the selected group has income at or below the LICO.[48]

Changes in disposable income for each decile under certain options is calculated by comparing "base" disposable income and "variant". Base is calculated by using the default, or status quo, tax/transfer parameters. Variant is calculated using the parameter

[48] The LICO measures used in the SPSD/M do not correspond exactly to the published LICO for 2004, but this is not an impediment since the research method focuses on marginal analysis.

values input by the user for that policy option. Various other cross-tabulations of variables are used to describe the selected population groups.

Status quo

The first step in the research process is to describe the population contained in the SPSD/M. Before beginning to alter the current OAS system and embarking on marginal analysis, it is important to understand the current situation for seniors, as it is modeled in the SPSD/M. This is considered the "status quo" situation. As discussed in part A of this section, because the database was created from multiple data sources and is comprised of "representative" Canadians, this does not necessarily coincide with actual statistics for 2004. However, when doing a comparative analysis such as this, it is the relative changes that are important and not the absolute values. All figures used from this point forward are generated from the SPSD/M. Table 6 shows that total status quo OAS/GIS spending[49] is $27,832.8 million. This is after the OAS claw-back of $782.8 million. In other words, without the income tested claw-back, program costs would be higher at $28,615.6 million.

Table 6: Total program spending, in millions

Net OAS payments	21,138.5
GIS payments	6,694.3
Total spending	**27,832.8**
OAS claw-back	782.8
Gross program costs	**28,615.6**

[49] This excludes SPA, as noted previously.

Table 7: Nuclear families, in thousands

Type[50]	1 person, male	1 person, female	2 people	Other families	Total
Family head >64	476.9	1,406.6	1,336.1	20.4	3,239.9
	15%	43%	41%	1%	100%
Family head 55 to 64	277.2	465.7	1,330.1	111.0	2,184.0
	13%	21%	61%	5%	100%
Family head <55	3,690.7	2,599.1	1,788.2	3,721.5	11,799.5
	31%	22%	15%	32%	100%
Total	4,444.8	4,471.4	4,454.4	3,852.9	17,223.5
	26%	26%	26%	22%	100%

Table 7 describes the population contained in the SPSD/M. There are 3,239,900 nuclear families headed by a senior represented in the database. Of these, 1,406,600 (43%) are single senior women and 476,900 (15%) are single senior men. As previously discussed, the 20,400 senior nuclear families (1%) that are larger than two are not considered in this study.

Table 8: The senior population, in thousands of individuals, and OAS

	Married[51] Men		Single Men		Married Women		Single Women		Total	
Partial OAS recipients due to residency	46.8	4%	9.8	2%	98.7	10%	35.9	3%	191.2	5%
Subject to OAS claw-back	134.5	10%	37.2	8%	17.4	2%	37.8	3%	226.9	5%
Full OAS	1,149.7	86%	406.0	90%	844.1	88%	1,322.3	95%	3,722.1	90%
Total >64[52]	1,331.0	100%	452.9	100%	960.3	100%	1,396.0	100%	4,140.2	100%

[50] The family head is assumed to be the oldest person in the nuclear family.

[51] SPSD/M provides marital status codes for each individual. These do not necessarily correspond to the living situation (or nuclear family) of the individual. In Tables 8 and 9, "married" refers to those coded "married" or "common-law union." "Single" refers to those coded "separated", "divorced", "widowed", or "single".

Table 8 shows that 5% of total seniors are subject to the OAS claw-back, while only 3% of single women are. Additionally, a greater proportion of women are subject to reduced OAS due to not meeting residency requirements than men. It is important to note that 90% of seniors receive full OAS under the current system.

Table 9: GIS recipients, in thousands of individuals

	Married Men		Single Men		Married Women		Single Women		Total	
GIS recipients	391.7	24%	202.3	12%	265.1	16%	772.8	47%	1631.9	100%
Total >64	1331.0	32%	452.9	11%	960.3	23%	1396.0	34%	4140.2	100%
Percent receiving GIS	29%		45%		28%		55%		39%	

Table 9 shows that 55% of single senior women receive GIS, while 45% of single senior men receive it. Single senior women make up 47% of GIS recipients, while they only comprise 34% of the senior population. Well over half of GIS recipients are women. It should be noted that the SPSD/M applies take-up rates to GIS.[53] The rates are estimated and applied based on the type of family unit (single pensioner, two pensioner couple or one-pensioner couple) and the eligible benefit level. OAS is assumed to have 100% take-up.

In order to understand the situation of seniors more fully, it is important to have a reference group to use for comparison purposes. In this case, 55 to 64-year-olds are chosen. Younger adults are dealing with unemployment and family formation issues, so are not as easy to compare to seniors. A better comparison can be made with 55 to 64

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[52] According to Statistics Canada (2005d), there were 1,795,500 senior men and 2,345,500 senior women in Canada in 2004. This represents a less than 1% difference from the estimates contained in the SPSD/M.

[53] Take-up rates are used since GIS must be applied for. For a discussion of take-up rates, see section II of chapter 1.

year olds, especially since many people retire early. It is important to bear in mind that this involves comparing different cohorts and not examining cohort effects. There are 2,184,000 nuclear families in this category, 13% of which are single men and 21% of which are single women (Table 7).

Table 10: Gini Coefficients and median incomes, based on distribution of disposable income

Type of Nuclear Family	*Gini*	*Median income*
All nuclear families	.4670	26,989
All nuclear families, family head < 65	.4821	28,997
Single men and women, 55 to 64	.4619	15,752
Couples, family head 55 to 64	.3889	43,760
All nuclear families, family head > 64	.3443	22,884
Married senior couples[54]	.3100	32,716
Single men and women > 64	.2619	16.952

Table 10 shows that single men and women aged 55 to 64 have the lowest median income. Single men and women 65 years of age and older have a slightly higher median income, signifying that reaching age 65 does increase income for singles. Also, the Gini coefficient is significantly reduced for the >64 group, showing that the distribution of income becomes much more equal. Gini coefficients vary significantly among groups in the population, but are lower for senior groups.

As pointed out by Kennedy (1989), when incomes are compared between seniors and non-seniors, different income needs must be considered. Seniors may have lower income needs and receive other non-cash support, such as housing subsidies and

[54] In all figures referring to nuclear families, a one person nuclear family is identified as a single person. A 2 person nuclear family, where the eldest person is over 64, is assumed to be a married senior couple. It is assumed that children under 18 would no longer be present in the home.

discounted transportation costs. However, seniors may have higher income needs due to, for example, increased medical costs.

Table 11: Percentage of nuclear families in selected disposable income groups

Disposable income	Single women, 55 to 64	Single women >64	Single men, 55 to 64	Single men >64	Couples, family head 55 to 64	Couples, family head >64
Up to 10,000	24.9%	1.7%	30.0%	1.1%	3.1%	1.2%
10,001 - 20,000	39.7%	68.4%	26.1%	55.0%	8.4%	4.5%
20,001 - 30,000	19.2%	19.8%	18.1%	21.3%	15.2%	36.7%
30,001 - 40,000	8.6%	5.4%	7.9%	11.3%	17.5%	22.9%
40,001 - 50,000	3.9%	2.2%	3.7%	3.6%	13.4%	12.9%
Over 50,000	3.8%	2.5%	14.4%	7.7%	42.3%	21.7%

Table 11 suggests that most single men and women earning less than $10,000 just before they reach 65, experience an increase in their income when they reach 65. This signifies that the public pension system may address the "abject" poverty issue. Very few seniors are living on less than $10,000 of disposable income. This is to be expected since the maximum OAS and GIS combined is equal to $12,208.36. The table also shows that the distribution of income is more concentrated for seniors than for 55 to 64 year olds. This was also shown in the Gini coefficients. Public pensions seem to have a substantial equalization effect. Again, however, we see that senior women are not faring as well as senior men. For single senior women, 70.1% have $20,000 or less of disposable income, while only 56.1% of single men are in this category.

Figure 4: Percentage of single women in selected disposable income groups

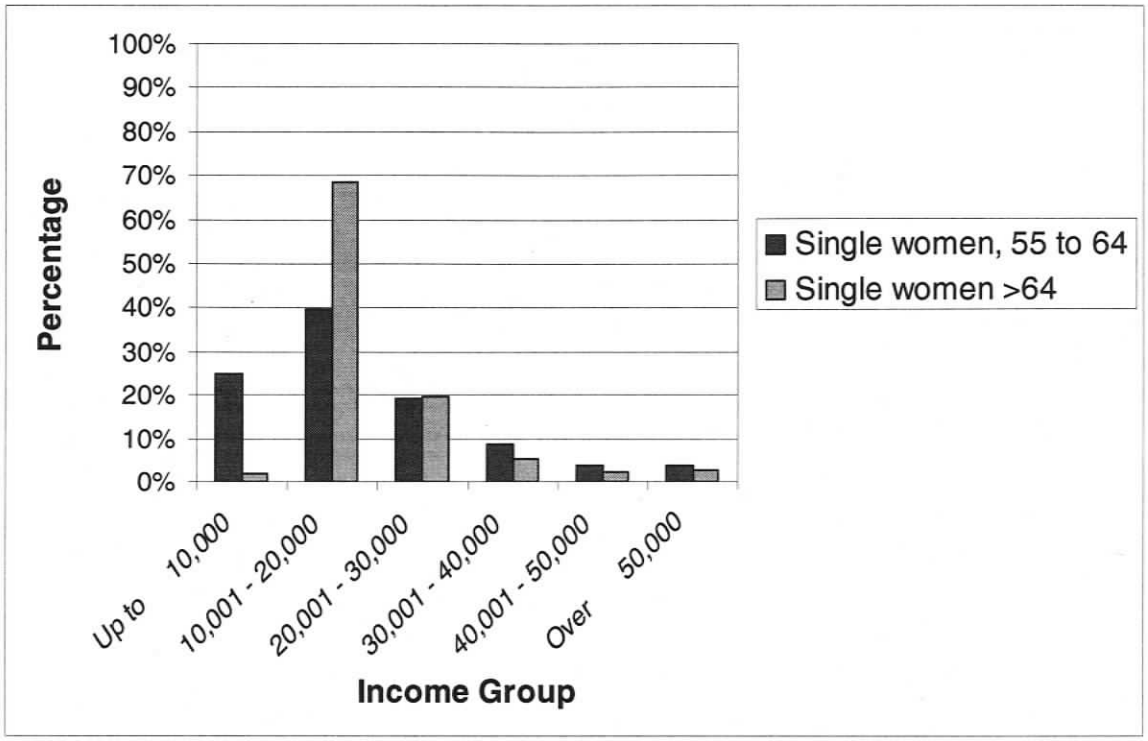
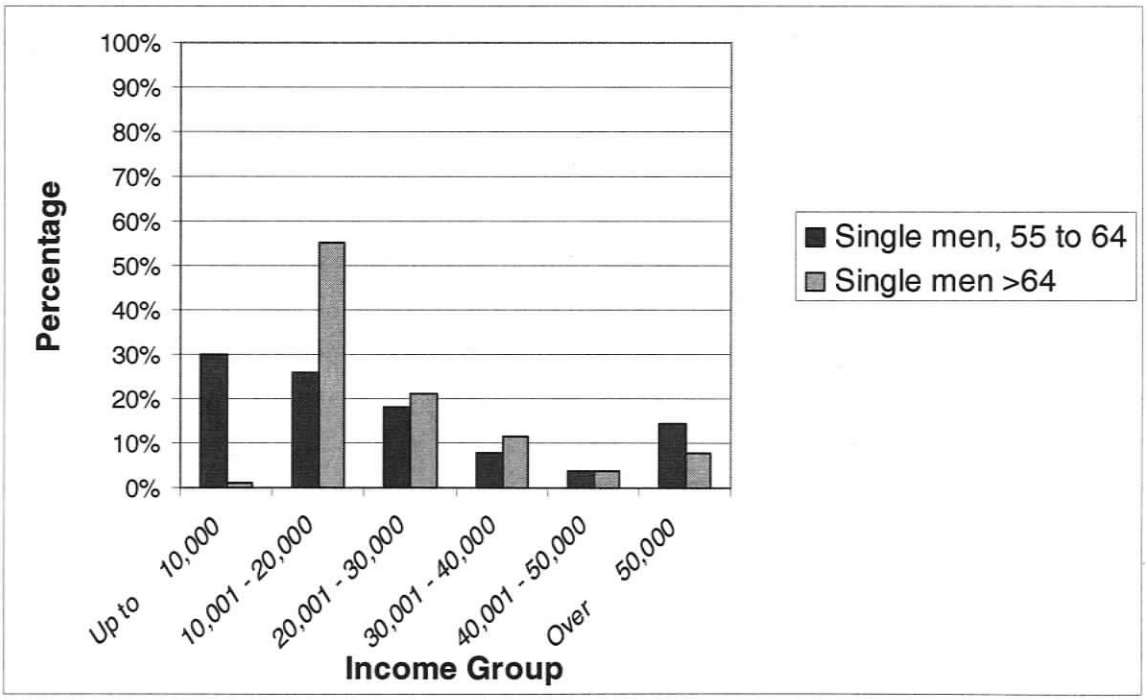


Figure 5: Percentage of single men in selected disposable income groups



Figures 4 and 5 show the shift in incomes that occurs when single Canadians reach age 65 in a more visual way. There are fewer people at both the bottom and the top of the income distribution for those 65 and older.

An analysis of income deciles for selected groups is shown in Tables 12 to 14. These tables show that income is less evenly distributed among all senior nuclear families than among single senior women. The top 10% of single senior women have 23.3% of the disposable income, while the top 10% of all senior nuclear families have 28.81% of the disposable income. However, it is clear from examining the decile end points that income levels are significantly lower for single senior women than they are for single senior men. For example, over 20% of single senior men have income over $30,000, while only approximately 10% of single senior women have income this high.

Table 12: Income deciles, by disposable income, nuclear families, family head > 64

	End points	*% disposable income*
1	Min -14,084	3.9%
2	14,085-15,164	4.9%
3	15,165-16,928	5.3%
4	16,929-19,500	6.0%
5	19,501-22,884	7.1%
6	22,885 -26,409	8.2%
7	26,410-31,029	9.5%
8	31,030-37,964	11.4%
9	37,965-53,178	14.8%
10	53,179- Max	28.8%

Table 13: Income deciles, by disposable income, single senior women

	End points	*% disposable income*
1	Min -13,558	5.7%
2	13,559-14,270	6.8%
3	14,271-14,770	7.3%
4	14,771-15,342	7.5%
5	15,343-16,504	8.0%
6	16,505-17,899	8.5%
7	17,900-19,943	9.3%
8	19,944-23,103	10.7%
9	23,104-30,117	12.9%
10	30,118- Max	23.3%

Table 14: Income deciles, by disposable income, single senior men

	End points	*% disposable income*
1	Min -13,693	4.8%
2	13,694-14,718	5.6%
3	14,719-15,635	5.9%
4	15,636-16,969	6.4%
5	16,970-18,446	7.2%
6	18,447-20,635	7.4%
7	20,636-25,388	8.9%
8	25,389-31,468	11.6%
9	31,469-43,753	13.7%
10	43,754- Max	28.5%

The simulations also examine changes in poverty rates. To be consistent with the income analysis, which uses disposable income, after-tax LICO measures are used as guidelines for poverty rates. Families at or below the LICO are considered to be living in poverty, for the purposes of this study.

Table 15: Percentage of nuclear families at or below after-tax LICO

All nuclear families	21.9%
All nuclear families, family head < 65	21.6%
Couples, family head 55 to 64	12.3%
Single women, 55 to 64	44.4%
Single men, 55 to 64	44.6%
All nuclear families, family head > 64	23.1%[55]
Married senior couples	8.8%
Single senior women	34.6%
Single senior men	28.5%

As is shown in Table 15, poverty rates for single senior women are significantly higher than those for senior couples and, though to a lesser extent, single senior men. Though poverty rates are lower for singles 65 and over than for singles 55 to 64, low income incidence declines much more for men than for women. This could be due to higher pensions and investment income for senior men, which they are not accessing until 65. This table also confirms that poverty among single seniors may not be as widespread as poverty among younger single Canadians. This is in part due to the increases in transfer payments to seniors in the last few decades. Poverty among all groups is equally important, but will not be addressed in this paper. However, it could be asserted that following a similar approach as was used to bring many seniors out of poverty could help other groups. It is important to bear in mind that increases in funding for OAS could come at the expense of funding for other programs, which could worsen the economic situation of these younger singles. As discussed in chapter 2, seniors can exert a large amount of political pressure which could cause the needs of other groups in society to be overlooked or given a lower priority.

[55] This output from SPSD/M is generally consistent with Prus (1999) who identified that 20% of senior headed families are living in poverty.

After describing the population and establishing key status quo measures, the next step in the research process is to examine each option by adjusting the applicable parameters of the tax/transfer system. Appendix A provides a description of the parameter changes required for Options 1 and 2. No parameter changes are required for Option 3. Two parameter values should be noted. For 2004, the SPSD/M value for basic annual OAS is $5,578.53. The income threshold used to perform the claw-back is $58,730.86.

C. Results

This section presents the results of the simulations for each policy option identified in chapter 2. Each policy option is implemented using the parameter changes described in Appendix A. Changes in median incomes, Gini coefficients and poverty rates are examined to determine the distributional effects of each option. The effects on single senior women are compared to those on senior couples and single senior men.

Option 1: A Return to Universality

Option 1 investigates the effects of removing the claw-back and returning OAS to its original universal state. In part A, the claw-back is removed and OAS payment levels are kept constant. In part B, the claw-back is removed and OAS payment levels are decreased in order to keep total OAS spending equal to the status quo. In part C, the claw-back is removed and OAS payment levels are decreased in order to decrease total OAS spending.

Part A

Option 1A involves removing the claw-back, while keeping OAS payments constant. This obviously increases OAS spending by the amount of the current claw-back of $782.8M. Poverty rates do not change under this scenario, since the claw-back only affects higher income seniors. Median incomes are also not affected, since the ordering of incomes is the same. The Gini coefficients, however, are affected since incomes would increase at the top end of the distribution.[56]

Overall, the implementation of this option would have a negligible effect. Poverty rates would not change and the distribution of income would change slightly. The winners in this situation would be those in the top decile, as they are the only ones affected by the claw-back. However, it should be reinforced that this would require an increase in government revenue available for the OAS program – either an increase in taxes or a reallocation of revenues from other programs. This is unlikely to be a politically feasible option. Recently, it has been shown that targeted increases for low income seniors are politically acceptable. The 2005 Budget included increases to GIS of up to $755 million in the next 5 years. However, removing the claw-back would be a targeted increase for higher income seniors.

Part B

Option 1B removes the claw-back and reduces OAS payments to keep total program spending levels constant. The current spending on OAS is the net amount equal to $21,138.5M, plus $6,694.3M for GIS. A universal benefit, keeping current spending levels constant, would be equal to $5,386. This represents a decrease of 3.45% from the

[56] As shown in Table 23, the Gini coefficients increase slightly under this policy option.

current annual basic OAS of 5,578.53. This payment level was obtained through estimation and trial and error. It is the whole dollar amount that brings spending levels closest to the status quo situation, as shown in Table 16.

Table 16: Option 1B: Total program spending, in millions

OAS	21,164.8
GIS	6,666.3
Total	27,831.1
Status quo	27,832.8
Difference	1.7

Option 1B increases poverty rates because payments to all seniors would be decreased. Median incomes fall. Gini coefficients increase more than they do in Option 1A. (See Table 23) Since Option 1B affects the income distribution, the average changes in annual disposable income for each income decile are also calculated and are shown in Tables 17 to 19. The results for single senior women are very similar to those of all nuclear families headed by a senior and single senior men. All deciles would lose disposable income, except for the top decile. The top decile of single senior women would gain less than that of men, since fewer women would have been affected by the claw-back.

Table 17: Option 1B: Change in disposable income, in millions, nuclear families, family head > 64

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	-53.4	-1.4%
2	-61.5	-1.3%
3	-60.7	-1.2%
4	-55.5	-1.0%
5	-69.4	-1.0%
6	-91.0	-1.1%
7	-76.5	-0.8%
8	-66.1	-0.6%
9	-52.3	-0.4%
10	373.1	1.3%
Overall	-213.3	-0.2%

Table 18: Option 1B: Change in disposable income, in millions, single senior women

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	-22.7	-1.4%
2	-26.8	-1.4%
3	-27.1	-1.3%
4	-25.9	-1.2%
5	-26.2	-1.2%
6	-23.3	-1.0%
7	-21.6	-0.8%
8	-20.3	-0.7%
9	-19.5	-0.5%
10	42.8	0.7%
Overall	-170.6	-0.6%

Table 19: Option 1B: Change in disposable income, in millions, single senior men

Decile	Change in disposable Income $	Change as a percent of status quo disposable income
1	-8.5	-1.5%
2	-9.1	-1.4%
3	-9.0	-1.2%
4	-8.4	-1.1%
5	-8.1	-0.9%
6	-7.1	-0.8%
7	-7.0	-0.7%
8	-6.3	-0.4%
9	-5.6	-0.3%
10	74.9	2.2%
Total	5.9	0.1%

Table 20: Option 1B: Percentage of nuclear families in selected disposable income groups

Disposable income	Single women >64		Single men >64		Couples, family head >64	
	Status quo	Option 1B	Status quo	Option 1B	Status quo	Option 1B
Up to 10,000	1.7%	1.7%	1.1%	1.1%	1.2%	1.2%
10,001 - 20,000	68.4%	69.4%	55.0%	56.0%	4.5%	5.0%
20,001 - 30,000	19.8%	18.9%	21.3%	20.7%	36.7%	36.7%
30,001 - 40,000	5.4%	5.3%	11.3%	11.0%	22.9%	22.7%
40,001 - 50,000	2.2%	2.2%	3.6%	2.9%	12.9%	12.8%
Over 50,000	2.5%	2.5%	7.7%	8.3%	21.7%	21.5%

Table 20 shows that option 1B causes an increase in the percentages of seniors with lower incomes ($10,000 to $20,000). The income distribution becomes more uneven. Overall, however, the effect on the distribution would be minimal for all groups.

Part C

Option 1C entails keeping a universal benefit, but decreasing program spending to account for demographic changes and budget pressures. Intuitively, it can be said that the effects seen in Option 1B would be magnified. The magnitude of this increase needs to be investigated. The amount that total OAS program spending needs to be decreased is

highly debatable, as discussed in chapter 2. A 10% decrease was selected. This is approximately the decrease intended by the Seniors Benefit plan by the year 2030.[57] Therefore, the total program cost goal is 27,832.8 * 90% = 25,049.52, as shown in Table 21. Assuming no change to the GIS program, the new universal OAS benefit would be $4,705. Again, this was determined through estimation and trial and error.

Table 21: Option 1C: Total program spending, in millions

OAS	18,488.7
GIS	6,561.4
Total	25,050.1
Goal total	25,049.5
Difference	0.6

Table 22: Option 1C: Percentage of nuclear families in selected disposable income groups

Disposable income	*Single women >64*		*Single men >64*		*Couples, family head >64*	
	Status quo	Option 1C	Status quo	Option 1C	Status quo	Option 1C
Up to 10,000	1.7%	1.7%	1.1%	1.1%	1.2%	1.2%
10,001 - 20,000	68.4%	71.1%	55.0%	59.2%	4.5%	7.8%
20,001 - 30,000	19.8%	17.4%	21.3%	17.8%	36.7%	36.7%
30,001 - 40,000	5.4%	5.4%	11.3%	10.8%	22.9%	21.5%
40,001 - 50,000	2.2%	1.9%	3.6%	3.9%	12.9%	12.0%
Over 50,000	2.5%	2.5%	7.7%	7.3%	21.7%	20.8%

Table 22 shows similar results to those in Table 20. More seniors move into the $10,000 to $20,000 category. For Option 1C, the effects noted in 1B are more exaggerated. It is clear that, without changing the current OAS/GIS program, a universal benefit with decreased total spending would have detrimental effects to many seniors.

[57] By 2030, income and benefit levels will have increased. However, the relative changes of implementing this option should be the same in 2030 as they would be in 2004.

Comparative analysis

Each part of Option 1 represents a progressively worse situation for the majority of seniors. As shown in Table 23, Gini coefficients increase for all groups, meaning income becomes less evenly distributed. However, a significant increase in the Gini does not occur until total spending is decreased under Option 1C.[58] Tables 24 and 25 illustrate that median incomes fall for all groups and poverty rates increase under Options 1B and 1C. Option 1A does not affect median incomes or poverty rates, since only those with the highest incomes are affected by the change.

Table 23: Option 1: Changes in Gini coefficients, based on disposable income

Family Type	Status Quo	Option 1A	Option 1B	Option 1C
All nuclear families, family head > 64	.3443	+.0027	+.0049	+.0131
Married senior couples	.3100	+.0033	+.0059	+.0156
Single senior men and women	.2619	+.0025	+.0050	+.0144

Table 24: Option 1: Changes in median disposable income

Family Type	Status Quo	Option 1A	Option 1B	Option 1C
All nuclear families, family head > 64	22,884	n/c	-214	-1,133
Married senior couples	32,716	n/c	-243	-1,086
Single senior men and women	16,952	n/c	-169	-765
Single senior women	16,504	n/c	-197	-832
Single senior men	18,446	n/c	-136	-728

Table 25: Option 1: Changes in poverty rates

Family Type	Status Quo	Option 1A	Option 1B	Option 1C
All nuclear families, family head > 64	23.1%	n/c	+1.0%	+4.1%
Married senior couples	8.8%	n/c	+0.5%	+2.9%
Single senior women	34.6%	n/c	+1.3%	+5.3%
Single senior men	28.5%	n/c	+1.3%	+3.9%

[58] As noted in chapter 2, changes in the Gini of .01 are significant (Erksoy et al., 1995)

Option 2: Increased Targeting

In this option, the effects of increasing the OAS claw-back to decrease total OAS spending are investigated. In part A, the claw-back income threshold is decreased in order to decrease total spending (for demographic pressures or to allocate to other programs). In part B, the savings generated are allocated to GIS.

Income threshold

Were the amount of OAS clawed back to increase, by decreasing the income threshold, there would be much debate about what the new income threshold should be. It would be logical to tie it to an indexed income level that will automatically change each year, depending on the performance of the economy. Two possibilities would be to use the average industrial wage, which is approximated by the CPP YMPE, or the LICO measures produced by Statistics Canada. In 2004, the YMPE was $40,500. The LICO for a one person household living in an urban area with a population of 30,000 to 99,999 in 2004 was $17,407[59] (Statistics Canada, 2005). (The LICO for a one person household should be used since the claw-back is based on individual income.) The income threshold could be tied to this measure by making it some multiple of the LICO. In both parts A and B, the option is examined using both the YMPE of $40,500 and $34,814, an amount equal to twice the LICO measure.

Part A

The OAS claw-back income threshold is changed from the status quo of $58,730.86 to $40,500 and $34,814. Gini coefficients decrease under this scenario.

[59] This amount was chosen since it is the middle LICO, based on size of urban area.

People with higher incomes receive smaller OAS payments. It is not necessary under either of these scenarios to examine poverty rates or changes in disposable income. Since neither the maximum amount of OAS or GIS payable under the program are changed, only those at the upper end of the income distribution would be affected. Total spending under this scenario falls. As Table 26 shows, program spending would decrease more with the LICO-based threshold because it is lower and thus the amount of OAS clawed back is higher. Under the YMPE and LICO-based thresholds, total program spending is reduced 2.2% and 3.4%, respectively.

Table 26: Option 2A: Total program spending, in millions

	2A: YMPE	2A: 2XLICO
OAS	20,535.6	20,199.9
GIS	6,694.7	6,694.9
Total	27,230.3	26,894.8
Status quo	27,832.8	27,832.8
Difference	602.5	938.0
% of status quo	2.2%	3.4%

Part B

The analysis in part A shows that reducing the income threshold would reduce Gini coefficients, but would not have any effect on poverty rates. If total spending needs to be decreased, this is a reasonable option, as neither poverty rates nor Gini coefficients are increased. However, to reduce poverty rates, the savings generated could be allocated to GIS. This is illustrated in Option 2B.

Through estimation and trial and error, the new GIS levels that result in the same total OAS program spending are calculated for each of the income threshold options. Using the YMPE of $40,500, GIS payments can be increased by 4.86% without changing

total program spending levels. Basic annual GIS to married pensioners (BGISM) can be increased from $4,318.47 to $4,528 and basic annual GIS to single pensioners (BGISS) can be increased from $6,629.83 to $6,952. Using the LICO-based threshold of $34,814, BGISM can be increased to $4,637 and BGISS can be increased to $7,119, representing a 7.38% increase. As shown in Table 27, total program spending remains basically constant.

Table 27: Option 2B: Total program spending, in millions

	2B: YMPE	2B: 2XLICO
OAS	20,535.6	20,199.9
GIS	7,298.4	7,632.7
Total	27,834.0	27,832.6
Status quo	27,832.8	27,832.8
Difference	1.2	0.2

Since GIS payments are changed in this option, poverty rates and the disposable income distribution are significantly affected. Table 28 shows that median incomes would increase under both options, but more so when using the LICO-based threshold. As would be expected, Table 29 shows that poverty rates decrease more when the LICO-based income threshold is used. More savings are generated, which lead to higher GIS payments.

Table 28: Option 2B: Changes in median disposable income

Family Type	Status Quo	2B: YMPE	2B: 2XLICO
All nuclear families, family head > 64	22,884	+156	+241
Married senior couples	32,716	+88	+170
Single senior men and women	16,952	+301	+459
Single senior women	16,504	+281	+441
Single senior men	18,446	+118	+208

Table 29: Option 2B: Changes in poverty rates

Family Type	Status Quo	2B: YMPE	2B: 2XLICO
All nuclear families, family head > 64	23.1%	-1.4%	-1.9%
Married senior couples	8.8%	-0.4%	-0.6%
Single senior women	34.6%	-2.3%	-2.9%
Single senior men	28.5%	-1.2%	-2.2%

In order to examine the effects more closely, changes in disposable income by decile for certain groups are calculated and shown in Tables 30 to 35.

Table 30: Option 2B: YMPE, Change in disposable income, in millions, nuclear families, family head > 64

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	162.7	4.3%
2	106.5	2.3%
3	92.6	1.8%
4	77.3	1.3%
5	53.5	0.8%
6	65.3	0.8%
7	51.0	0.6%
8	-1.8	-0.0%
9	-125.9	-0.9%
10	-240.0	-0.9%
Overall	241.2	0.3%

Table 31: Option 2B: YMPE, Change in disposable income, in millions, single senior women

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	102.3	6.4%
2	42.7	2.2%
3	41.5	2.0%
4	40.8	1.9%
5	41.5	1.9%
6	38.5	1.6%
7	28.5	1.1%
8	4.8	0.2%
9	2.9	0.1%
10	-88.7	-1.4%
Overall	254.8	0.9%

Table 32: Option 2B: YMPE, Change in disposable income, in millions, single senior men

Decile	Change in disposable Income $	Change as a percent of status quo disposable income
1	19.2	3.3%
2	13.6	2.0%
3	13.6	1.9%
4	14.4	1.9%
5	13.0	1.5%
6	5.3	0.6%
7	1.4	0.1%
8	0.0	0.0%
9	-15.1	-0.9%
10	-44.7	-1.3%
Overall	20.8	0.2%

Table 33: Option 2B: 2XLICO, Change in disposable income, in millions, nuclear families, family head > 64

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	231.8	6.1%
2	173.8	3.7%
3	159.3	3.1%
4	117.9	2.0%
5	83.2	1.2%
6	102.9	1.3%
7	76.3	0.8%
8	-34.6	-0.3%
9	-202.8	-1.4%
10	-332.8	-1.2%
Overall	375.0	0.4%

Table 34: Option 2B: 2XLICO, Change in disposable income, in millions, single senior women

Decile	Change in disposable income $	Change as a percent of status quo disposable income
1	133.8	8.3%
2	66.1	3.4%
3	64.4	3.1%
4	61.9	2.9%
5	62.3	2.8%
6	58.5	2.4%
7	42.8	1.6%
8	7.6	0.3%
9	4.1	0.1%
10	-140.4	-2.1%
Overall	361.1	1.3%

Table 35: Option 2B: 2XLICO, Change in disposable income, in millions, single senior men

Decile	Change in disposable Income $	Change as a percent of status quo disposable income
1	37.3	6.4%
2	20.6	3.1%
3	20.4	2.8%
4	20.9	2.7%
5	19.4	2.2%
6	8.3	0.9%
7	2.1	0.2%
8	-2.0	-0.1%
9	-33.7	-2.0%
10	-56.9	-1.6%
Overall	36.4	0.3%

As shown in Tables 30 and 33, for all senior families, the top three deciles would lose disposable income under either income threshold option, while all others gain. Disposable income increases 4.3% or 6.1% for the lowest decile. Tables 31 and 34 show that single senior women in the lowest decile see increases of 6.4% or 8.3%. These are larger than the 3.3% or 6.4% increases in the lowest decile for single senior men (Tables 32 and 35). For single senior women, only those in the top decile experience decreases in disposable income (Tables 31 and 34). As mentioned previously, this is due to the fact that incomes are lower for single senior women and fewer of them are affected by the claw-back.

Table 36: Option 2B: YMPE, Percentage of families in selected disposable income groups

Disposable income	*Single women >64*		*Single men >64*		*Couples >64*	
	Status quo	2B: YMPE	Status quo	2B: YMPE	Status quo	2B: YMPE
Up to 10,000	1.7%	1.7%	1.1%	1.1%	1.2%	1.2%
10,001 - 20,000	68.4%	68.1%	55.0%	54.4%	4.5%	4.3%
20,001 - 30,000	19.8%	20.1%	21.3%	22.0%	36.7%	36.2%
30,001 - 40,000	5.4%	5.7%	11.3%	11.6%	22.9%	23.7%
40,001 - 50,000	2.2%	2.1%	3.6%	4.3%	12.9%	13.2%
Over 50,000	2.5%	2.3%	7.7%	6.7%	21.7%	21.4%

Table 37: Option 2B: 2XLICO, Percentage of families in selected disposable income groups

Disposable income	*Single women >64*		*Single men >64*		*Couples >64*	
	Status quo	2B: 2XLICO	Status quo	2B: 2XLICO	Status quo	2B: 2XLICO
Up to 10,000	1.7%	1.7%	1.1%	1.1%	1.2%	1.2%
10,001 - 20,000	68.4%	67.8%	55.0%	54.3%	4.5%	3.9%
20,001 - 30,000	19.8%	20.5%	21.3%	22.2%	36.7%	36.4%
30,001 - 40,000	5.4%	6.0%	11.3%	11.7%	22.9%	23.9%
40,001 - 50,000	2.2%	1.9%	3.6%	4.1%	12.9%	13.3%
Over 50,000	2.5%	2.1%	7.7%	6.6%	21.7%	21.3%

Tables 36 and 37 show that the percentage of seniors with under $20,000 of disposable income decreases more when the LICO-based income threshold is used than when the YMPE-based threshold is used. This means that more people have incomes over $20,000 with the LICO-based policy option. The lowest income group does not see a change, because, though GIS increases slightly, these people are not receiving enough GIS to make a large impact. The number of single senior women and men with incomes from $20,000 to $40,000 increases more when the LICO-based threshold is used.

Comparative analysis

Table 38: Option 2: Changes in Gini coefficients, based on disposable income

Family Type	Status Quo	2A: YMPE	2A: 2XLICO	2B: YMPE	2B: 2XLICO
All nuclear families, family head > 64	.3443	-.0019	-.0028	-.0065	-.0098
Married senior couples	.3100	-.0018	-.0026	-.0047	-.0077
Single senior men and women	.2619	-.0024	-.0037	-.0090	-.0133

As shown in Table 38, Gini coefficients progressively decrease under the scenarios of Option 2. Option 2B: 2XLICO produces the lowest Gini for all senior groups. In fact, this is the only option that would significantly reduce the Gini, and would do so only for single senior men and women. As previously mentioned, Option 2A affects only seniors with higher incomes, so poverty rates and median incomes are not changed. In Option 2B, the LICO-based threshold creates lower poverty rates and higher median incomes for all family types.

Option 3: A Family Income Test

In option 3, the probable effects of changing from an individual income test for the OAS claw-back to a family income test (both spouses) is investigated. The number of additional seniors that would be affected by the claw-back if it were performed in this way and the amount that total OAS spending would decrease are calculated. As discussed in the other options, these savings could be used to account for demographic pressures or could be allocated to GIS.

In order to see the comprehensive effects of changing to a family income test, some reprogramming of the SPSD/M would be required. This is outside the scope of this project. However, some observations can be made by investigating who is currently

affected by the claw-back and who would be affected if it were changed. The savings generated can also be estimated by examining family income levels.

Current claw-back

Currently, individuals with incomes over $58,730.86 are subject to the claw-back. OAS benefits are reduced by 15% of any income over this amount. Benefits are fully lost at an income level of $95,921.06. Approximately 171,800 men and 55,200 women repay all or part of their OAS benefits through the claw-back (see Table 8). The claw-back currently generates $782.8 M in savings. Tables 39 and 40 show how individuals are affected by the claw-back. Half of men subject to the claw-back repay 90-100% of their OAS, while only 22% of women subject to the claw-back do.

Table 39: Senior men affected by the claw-back, in thousands, by nuclear family size[60]

% OAS Repaid	1 person	2 people	Total	Total
Up to 10%	4.8	16.0	20.8	12.1%
10-20%	3.0	10.2	13.2	7.7%
20-30%	4.4	4.4	8.8	5.1%
30-40%	1.5	7.4	8.9	5.2%
40-50%	3.5	3.6	7.1	4.1%
50-60%	2.7	6.5	9.2	5.4%
60-70%	0.5	8.3	8.8	5.1%
70-80%	0.5	1.7	2.2	1.3%
80-90%	0.0	5.4	5.4	3.2%
90-100%	19.3	67.9	87.2	50.8%
Total	40.2	131.4	171.6	100.0%

[60] The totals for men and women in Tables 39 and 40 differ slightly from figures previously mentioned and those in Table 41 due to the exclusion of individuals living in nuclear families larger than 2 and rounding error.

Table 40: Senior women affected by the claw-back, in thousands, by nuclear family size

% OAS Repaid	1 person	2 people	Total	Total
Up to 10%	6.0	1.6	7.6	13.8%
10-20%	7.3	1.9	9.2	16.8%
20-30%	5.3	2.9	8.2	14.9%
30-40%	1.7	4.4	6.1	11.1%
40-50%	1.4	1.2	2.6	4.7%
50-60%	2.6	1.1	3.7	6.7%
60-70%	0.7	0.7	1.4	2.6%
70-80%	1.0	1.2	2.2	4.0%
80-90%	0.2	1.5	1.7	3.1%
90-100%	11.2	1.0	12.2	22.2%
Total	37.4	17.5	54.9	100.0%

In order to investigate the effects of switching to a family income test, the number of families currently impacted by the claw-back needs to be assessed.

Table 41 shows that only 2.7% of single senior women are affected by the claw-back while 8.4% of single men and 10.0% of couples are affected.

Table 41: Percentage of senior nuclear families affected by the claw-back

	1 person, male	1 person, female	2 people
Total families	476.9	1406.6	1336.1
Status quo claw-back	40.1	37.6	134.2
Percent	8.4%	2.7%	10.0%

Family claw-back

Since a family income-based claw-back would include the incomes of two people, the current income threshold should be adjusted. Equivalency ratios could be used to determine an income threshold for couples. Though estimates range, 1.4 is a common equivalency ratio used for two people. This multiple is used by Statistics Canada when computing the Low Income Measure (Statistics Canada, 2005). In this case, since the income threshold is $53,730.86 for individuals, it would be $75,223.20 for couples. The

threshold would not change for singles. As shown in Table 42, a family claw-back would affect 13.2% of couples.

Table 42: Option 3: Percentage of senior nuclear families affected by the family claw-back

	1 person, male	1 person, female	2 people
Total	476.9	1406.6	1336.1
Family claw-back	40.1	37.6	176.9
Percent	8.4%	2.7%	13.2%

Another way to examine the income thresholds would be to look at the distribution of total income for senior couples by deciles (Table 43). The total income figure used here does not coincide exactly with the income used for the claw-back, but it will give a general idea.[61] Ten percent of senior couples have incomes over $89,341 and these couples represent 30.4% of the total income of senior couples. Table 43 shows that between 10% and 20% of senior couples would have incomes over $75,223.20, since this income figure falls within the second highest decile. This is consistent with the conclusion shown in Table 42 that 13.2% of senior couples would be affected by the family claw-back.

[61] The SPSD/M uses total income minus deductions to arrive at net income, which is used as the income level for the claw-back.

Table 43: Income deciles, by total income, senior couples

Decile	End points	% total income
1	Min -21990	3.5%
2	21991-24319	4.8%
3	24320-26888	5.3%
4	26889-30365	5.9%
5	30366-34520	6.7%
6	34521-40461	7.7%
7	40462-48745	9.2%
8	48746-61375	11.2%
9	61376-89340	15.2%
10	89341- Max	30.4%
Total		100.0%

Potential savings

In order to estimate the savings generated by the family claw-back, the proportion of senior couples that would be subject to various percentages of the claw-back needs to be examined. Seniors are assumed to be receiving full OAS, since most individuals in the database are not subject to the partial residency reduction (Table 8). The analysis is split between couples with one OAS recipient and those with two OAS recipients. The amount of OAS recovered is approximated in Tables 44 and 45. The midpoint repayment percentage of each group is multiplied by the OAS income ($5,578.53 for one OAS recipient couples and $11,157.06 for two OAS recipient couples), and then multiplied by the number of couples in that group.

Table 44: Option 3: Senior couples, in thousands, one OAS recipient (i.e. one member > 64)

% OAS repaid[62]	# of one OAS couples (000)	% of total one OAS couples	% of those paying claw-back	Midpoint % OAS repaid	Estimated claw-back
None	395.7	83.9%	0.0%	0%	0.00
0 -10%	6.2	1.3%	8.1%	5%	1,729,344.30
10-20%	9.1	1.9%	11.9%	15%	7,614,693.45
20-30%	4.6	1.0%	6.0%	25%	6,415,309.50
30-40%	2.9	0.6%	3.8%	35%	5,662,207.95
40-50%	4.9	1.0%	6.4%	45%	12,300,658.65
50-60%	2.7	0.6%	3.5%	55%	8,284,117.05
60-70%	7.0	1.5%	9.2%	65%	25,382,311.50
70-80%	0.9	0.2%	1.2%	75%	3,765,507.75
80-90%	1.8	0.4%	2.4%	85%	8,535,150.90
90-100%	1.0	0.2%	1.3%	95%	5,299,603.50
100%	35.1	7.4%	46.1%	100%	195,806,403.00
Total	471.9	100.0%	100.0%		280,795,307.55

Table 45: Option 3: Senior couples, in thousands, two OAS recipients (i.e. both members > 64)

% OAS repaid	# of two OAS couples (000)	% of total two OAS couples	% of those paying claw-back	Midpoint % OAS repaid	Estimated claw-back
None	763.4	88.3%	0.0%	0%	0.00
0-10%	23.6	2.7%	23.4%	5%	13,165,330.80
10-20%	11.5	1.3%	11.4%	15%	38,491,857.00
20-30%	8.5	1.0%	8.4%	25%	23,708,752.50
30-40%	7.7	0.9%	7.6%	35%	30,068,276.70
40-50%	3.2	0.4%	3.2%	45%	16,066,166.40
50-60%	5.7	0.7%	5.7%	55%	34,977,383.10
60-70%	2.0	0.2%	2.0%	65%	14,504,178.00
70-80%	6.1	0.7%	6.1%	75%	51,043,549.50
80-90%	1.6	0.2%	1.6%	85%	15,173,601.60
90-100%	4.3	0.5%	4.3%	95%	45,576,590.10
100%	26.6	3.1%	26.4%	100%	296,777,796.00
Total	864.2	100.0%	100.0%		579,553,481.70

The total estimated OAS claw-back from couples is $860.4 million. In order to determine how much the total claw-back amount would increase with the family claw-

[62] The percentages were determined by sorting by family income. Income over the threshold of $75,223.20 was multiplied by 15% (the reduction rate) to calculate the claw-back amount. This was divided by the OAS income.

back, the status quo claw-back is calculated using the same method. Appendix B shows these calculations.

The family claw-back approximation is compared to the current amount being clawed back from seniors living in couples. (Individual claw-back amounts would remain the same, since the threshold will stay the same for them.) Table 46 shows that an additional $349.1 million would be clawed back from senior couples.

Table 46: Option 3: OAS claw-back, couples

Estimated family claw-back	860.4M
Estimated status quo	511.3M
Additional claw-back	349.1M

This increase in OAS claw-back represents 1.25% of current total program spending (349.1/ 27,832.8). In other words, the proposed family claw-back would decrease total program costs by approximately 1.25%. As shown in Option 2, a small reallocation of these savings towards GIS payments could make a difference in both Gini coefficients and poverty measures.

D. Limitations of research method

The research method employed has four main limitations. First of all, it does not address the incentive effects of OAS reform on pre-retirement employment and savings decisions. Changes in marginal tax rates could be used as a proxy to determine how changes in transfer payments would change after-tax income and therefore decision-making (Bordt et al., 1990). However, there is no consensus on how public pension

systems affect pre-retirement or retirement behaviour.[63] People may lack the sophistication required to predict future post-retirement marginal tax rates and tend to be myopic in their planning. Higher income people may have tax advisors that would advise them of likely future marginal tax rates, but low income people would likely not have this assistance. Low-income people face high effective marginal tax rates in retirement because a small amount of investment or other income reduces their GIS benefits. Once people are retired, and observe their effective marginal tax rates, they can do little to change their financial situation, especially if they are low-income. Therefore, marginal tax rate analysis is not included in this project. It also does not include an analysis of replacement rates of pre-retirement income, since OAS payments are not related to employment or pre-retirement income.

Secondly, the analysis is based on a point in time and not longitudinal or lifetime income information. However, if the year 2004 represents a typical year, the analysis is valid for other years. Income levels would change, but so would OAS and GIS benefits, since they are indexed. Other research discussed in this paper has used a similar approach. Tax incidence and Gini coefficients could be calculated using lifetime income in a lifecycle framework, based on assumptions about or knowledge of the tax/transfer policies in place over a person's life. The analysis contained in this paper, however, provides policy makers with information about program effects on seniors when they are seniors and not during other parts of their lives.

The analysis also reflects the 2004 demographic picture of Canadian seniors, which, over time, will change. As life expectancies continue to increase, this group will

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[63] Various opinions on this issue and discussion of this issue are available: Kennedy (1989), Fougere and Merette (1999), Osberg (1991), Battle (2003), Gee (1999), Binstock and George (1996), Hamilton (1999)

become larger, leading to higher absolute public pension expenditures. As work-force participation continues to increase for women, and their salaries become more and more comparable to those of men, incomes of senior women will increase. They will have higher CPP benefits and more money available for other savings (such as private pensions or RRSPs), which will increase their incomes after retirement. Other researchers (Smeeding & Sandstrom, 2005, for example) have noted that over time the number of single senior women will be increasing. This is due to the higher life expectancies of women and higher numbers of divorced and never-married women over time. The longer life expectancy of women is associated with chronic illnesses and disability, as well as low-income vulnerability (Health Canada, 1999). Assessing how the interaction of these predicted trends will affect income distribution among single senior women and public pension spending levels in future years would be useful. Another study like this one performed in 2015 or 2025 would likely lead to different results due to these changes.

Thirdly, though the SPA and provincial income supplement programs are included in the model, they are not addressed or discussed specifically.[64] Lastly, income includes government transfers, but not the value of government services seniors receive. It considers the distribution of income, but not wealth or overall well-being.

[64] These programs have a relatively minor impact on seniors (Baldwin, 2003)

Chapter 4 - Conclusion

This chapter provides highlights and concluding remarks, organized around the main themes of this project and thus revisiting the drivers of change introduced in chapter 1 and discussed in chapter 2. Additional general recommendations and recommendations for further research are also discussed.

A. Drivers of change

The situation for many seniors in Canada has been improving. Single senior women, however, still have high levels of poverty. Demographic trends and political pressures will influence the need for reform of OAS. Future reforms should not reverse the progress that has already been made and should keep moving towards improving the lives of seniors.

The Canadian retirement system, and OAS particularly, is under pressure from many sides. Chapter 2 described the drivers of change that influence public pension reform. Based on that discussion, and the results of the analysis presented in chapter 3, the following conclusions can be drawn.

Demographics

As shown in the analysis of Option 1C, merely decreasing OAS payments in order to address demographic pressures would have detrimental effects. Poverty rates would increase and median incomes would fall. Increasing the OAS claw-back, as modeled by

Option 2, would be a preferable way to decrease total OAS program spending. This change would not negatively affect poverty rates.

The question of whether OAS is currently in crisis, or will be soon, is debatable. There is no doubt that costs will increase. This is the result of the sheer number of people that will be eligible in the near future. However, the research associated with this study has not unequivocally shown that it will become unaffordable. Paying for the increased costs may involve a reallocation of resources. For example, taxes may need to be increased to move money from the private sphere to the public sector (as noted by Binstock & George (1996)). As well as the level of taxation, the allocation of government revenues may need to be adjusted. If there is an economic downturn in the near future, covering the increased costs of the OAS program will be a bigger challenge. However, this event would create problems in all areas of government spending, not just public pensions. It therefore seems unreasonable to target OAS for cost cutting at the present time.

Income distribution and poverty

This paper began by highlighting the current poverty rates for single senior women. Option 2B shows that poverty could be reduced by 2.9 percentage points by increasing the OAS claw-back and allocating the savings generated to GIS. Consistent with the findings of Prus (1999), the Gini coefficients are lower for seniors than for those 55 to 64. This shows that public pensions do redistribute income. Option 2B also has the largest effect on the income distribution. It would increase the redistribution already inherent to OAS.

Option 2B shows the largest decrease in poverty rates and a significant decrease in the Gini coefficient for single senior men and women. However, even in this scenario, the poverty rate is high. Targeting in this manner would need to increase substantially, or a combination of other changes to the retirement system in general would need to be made, in order to reduce poverty rates even more. The gap identified in chapter 1 between senior couples and single seniors is important, especially since research shows that there will be more single seniors in the future (due to increased life expectancy and divorce).

The GIS increases modeled in Option 2B are similar to those contained in Budget 2005 mentioned in section II of chapter 1. Poverty rates would be lower if this is implemented. However, higher income seniors would not be affected by the budget changes, since they do not include a related change to the claw-back for OAS. Median incomes would therefore remain the same and the Gini coefficient would fall slightly.

Increasing the OAS claw-back by decreasing the income threshold, as modeled in this study, would not generate the amount of program cost savings that may be required in the future. This is due to the fact that there are not many seniors with high incomes. The income threshold would need to be reduced even more than that which is modeled in order to generate significant savings.

Universality

A return to universality for OAS (i.e. a removal of the claw-back) is not likely. If total program spending were kept constant, this would cause an increase in poverty rates and diminish the redistributive effects of OAS (as shown in Option 1A). Smeeding and

Sandstrom (2005) note that Canada has reduced senior poverty while spending a "modest" amount by targeting the benefits (i.e. GIS). This is an effective tool that is less expensive than other possible programs. Additionally, political support is stronger for a more targeted OAS program.

The decision of whether to target based on family or individual income is a difficult (and political) one. Women's and other groups have shown a strong aversion to this in the past. However, changing to a family income test does not affect single senior women, who are the main group of interest. Their incomes could only be increased by this change, if and when the savings generated are allocated to GIS. Married senior women have very low poverty rates, especially when compared to Canadians in general. Therefore, a change to a family income test would have minimal negative effects on the overall poverty rates for senior women. Although the desire to have one's own income is understandable, we must ask ourselves whether government should be responsible for how money is shared within a married couple (Battle, 2003).

B. Additional recommendations

It is hoped that this research will inform the process of reforming OAS and the retirement income system in general. OAS may be only one part of the grand scheme of the retirement system, but it is a very important part for some people, especially single women. This research shows that reforming the OAS program could have a large impact on the quality of life of low-income seniors. However, the changes would need to be relatively large in order to have significant effects on income distribution. Furthermore, increased cash benefits alone may not necessarily be sufficient to substantially improve

low-income seniors' quality of life. Governments may also need to consider allocating more resources to strengthening institutions that support the senior population, such as health care, housing and long-term care facilities.

Canadian seniors are currently fairing about average among those in developed countries and much better than seniors in the U.S. Low income rates for seniors and income inequality in the U.S. are higher (Atkinson et al., 1995; Picot & Myles, 2005). In addition, contrary to what this research shows for the Canadian retirement system, the U.S. system tends to increase pre-retirement income inequality (Prus, 1999). Although any debate about public pensions in the U.S. is likely to influence the one in Canada (Baldwin, 2003), Canada should be cautious about following the lead of its closest neighbour on this issue. Currently, the U.S. government is discussing a privatization plan similar to what was done in the U.K. (Krugman, 2004). The U.K. privatized much of its social security system under Margaret Thatcher. Investment fees are now using up a large portion of returns for British investors and the government has had to institute a "charge cap." A large amount of government spending is still required to support low-income seniors who have not been able to adequately save for retirement.

Lessons can be learned from the privatization of public pensions in the U.K. There does not seem to be, however, a huge movement in this direction in Canada. Government instead supports private sector involvement indirectly, through increased support for private pensions and tax-sheltered savings, which cost the government money in lost tax revenues. This support has small, if any, impacts on single senior women and poverty. The government could instead choose to use those foregone revenues for other programs, such as OAS and GIS.

It is believed that federal surpluses will continue to be generated, given the current fiscal structure (Fougere & Ruggeri, 2001). As federal surpluses continue to be the norm, the potential exists for increases in spending to the OAS program, or at least for improving the program in the face of unfavourable demographic trends. Surpluses may also be used to pay off the government debt. Kesselman (2000) states that the reduction of government debt would allow government programs to be sustainable into the future. Less money would be required for debt payments, which would leave more money for programs. However, he also cautions against a fast debt repayment strategy because, "If the goal is to have smaller government and lower taxes both today and in future years, lower-income groups may never see any benefits from enhanced programs" (p.63). Therefore, it will be necessary to carefully balance different priorities in determining how to use surpluses.

C. Further research

The analysis in chapter 3 shows that younger single adults face very high low-income rates. Consistent with this project, Picot and Myles (2005) report that 37.1% of unattached 45-64 years olds in Canada are considered low income. Investigating the causes for this and possible solutions could be useful. It would also be useful to use longitudinal data and life course analysis of women that end up living in poverty in their later years. Determining the factors that cause this situation could help governments improve programs delivered throughout individuals' lives.

Assessing the regional differences in the standard of living for seniors could be important. There may be large disparities between the poverty levels faced by seniors in different areas of the country due to differing costs of living across cities and provinces.

As Kennedy (1989) points out, distributional analysis is only one part of policy analysis. Other aspects of the well-being of seniors could also be considered. Cuts to government services may have even larger effects on seniors than changes to the retirement system.

This study has assumed that resources are shared in a nuclear family and has disregarded any other living arrangements of seniors. It should be noted, however, that living arrangements could be an important factor in the well-being of seniors. Table 47 summarizes information from the 2001 census (Statistics Canada, 2002). Many seniors (13.3% of men and 12.1% of women) live with their adult children. To the extent that those children provide monetary and other supports, these seniors may be better off, despite possibly having low incomes. Living arrangements change as seniors age, which would have an impact on their well-being over time. Women over 85 are more likely than men over 85 to live in an institution, while men over 85 are more likely to live with their spouses than women over 85. In all age subcategories, women are more likely to live alone than men. Statistics Canada notes that from 1981 to 2001 there was an increase in the number of seniors living either alone or with spouses. Fewer seniors now live in institutions. Further analysis of the retirement system, which includes detailed living arrangement information for seniors and differences between senior age groups, would be very useful in assessing well-being.

Table 47: Living arrangements of Canadian seniors

	Alone	With Spouse or Partner	With Children	Health Care Institution	Other Arrangements	Total
Men, 65 and over	16.0%	61.4%	13.3%	4.9%	4.4%	100.0%
Men, 85 and over	22.7%	39.5%	8.5%	22.6%	6.7%	100.0%
Women, 65 and over	34.8%	35.4%	12.1%	9.2%	8.4%	100.0%
Women, 85 and over	38.5%	7.2%	8.4%	35.4%	10.6%	100.0%

(Statistics Canada, 2002)

Another important area to investigate is the distribution among the population of tax expenditures related to the deductibility of RRSP contributions. A minority of Canadians have the financial ability to contribute significantly and the RRSP contribution limit was increased in the latest federal budget.[65] As discussed in chapter 1, one of the reasons behind tax subsidization of RRSP (and RPP) contributions is to increase the overall savings rate. A recent news article (CBC News, 2005b) reported that the personal savings rate in Canada is lower than it has been since the 1920s. This may be a signal that RRSP policy is not achieving this objective and perhaps other policies could be used instead.

[65] Budget 2005 proposes increasing the maximum RRSP/RPP contribution to $22,000.

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Appendix A: Parameter Changes

The following describes the parameter changes required for each policy option.

Option 1

Option 1 involves removing the OAS claw-back under three different scenarios: current OAS payment levels, keeping total spending constant and reducing total spending. It requires the adjustment of OASRR and BOAS.

OASRR = OAS reduction rate = 15%[66]

Any income above the income threshold (OASTD) is multiplied by the OASRR.

OAS claw-back = OASRR * (income[67] - OASTD)

The claw-back amount is then compared to the OAS income the individual is receiving. The lesser amount becomes the OAS repayment amount. The claw-back is removed by making OASRR = 0. Parts B and C of Option 1 require the adjustment of the parameter BOAS. BOAS is the maximum OAS before the claw-back or partial residency adjustments.

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[66] Parameter values shown in appendix A are the 2004 values contained in the SPSD/M before adjustments for implementation of policy options.

[67] In this case, income is roughly equal to total income.

BOAS = basic annual OAS = $5,578.53

Option 2

In option 2, the OAS claw-back is increased by reducing the income threshold. It requires adjustments to the parameter OASTD.

OASTD = income threshold = $58,730.86.

Part B of this option requires the additional adjustment of the parameters BGISM and BGISS, since savings from the increased claw-back are allocated to GIS. These parameters represent the basic annual GIS payments to married and single pensioners, respectively.[68]

BGISM = basic annual GIS to married pensioners = $4,318.47

BGISS = basic annual GIS to singe pensioners = $6,629.83

This is the maximum benefit before reductions due to income levels. No adjustments are made to the reduction rates or income thresholds for GIS.

[68] BGISS also applies to married pensioners whose spouses do not qualify for GIS or SPA. BGISM applies to each pensioner in a married couple.

Option 3

Option 3 investigates moving from an individual income test for the OAS claw-back to a family income test. The analysis involves descriptions of the senior population, not parameter changes.

Appendix B: Status Quo Claw-Back Approximation

In order to determine the marginal increase in the total claw-back that would be generated by changing to the family claw-back, the status quo claw-back is calculated using the same approximation method. Since the income threshold for singles does not change, only senior couples need to be included in the calculation using the family claw-back. However, when calculating the status quo claw-back, both singles and couples are included so that totals can be compared to those generated by the algorithms used in the SPSD/M.

Table 48: Option 3: Estimated status quo OAS claw-back, seniors living in couples

% OAS repaid[69]	# of OAS earners (000)	Midpoint % OAS repaid	Estimated claw-back
None	2084.0	0%	0.00
0 -10%	20.4	5%	5,690,100.60
10-20%	12.5	15%	10,459,743.75
20-30%	9.8	25%	13,667,398.50
30-40%	9.3	35%	18,158,115.15
40-50%	7.8	45%	19,580,640.30
50-60%	10.5	55%	32,216,010.75
60-70%	4.9	65%	17,767,618.05
70-80%	7.8	75%	32,634,400.50
80-90%	5.2	85%	24,657,102.60
90-100%	3.7	95%	19,608,532.95
100%	56.8	100%	316,860,504.00
Total	2232.7		511,300,167.15

[69] The percentages were determined by sorting by individual income. Income over the threshold of $58,730.86 was multiplied by 15% (the reduction rate) to calculate the claw-back amount. This was divided by the OAS income.

Table 49: Option 3: Estimated status quo OAS claw-back, single seniors

% OAS repaid	# of OAS earners (000)	Midpoint % OAS repaid	Estimated claw-back
None	1805.7	0%	0.00
0-10%	11.4	5%	3,179,762.10
10-20%	15.6	15%	13,053,760.20
20-30%	5.3	25%	7,391,552.25
30-40%	5.9	35%	11,519,664.45
40-50%	5.9	45%	14,810,997.15
50-60%	1.5	55%	4,602,287.25
60-70%	1.5	65%	5,439,066.75
70-80%	0.3	75%	1,255,169.25
80-90%	2.6	85%	12,328,551.30
90-100%	0.5	95%	2,649,801.75
100%	27.3	100%	152,293,869.00
Total	1883.5		228,524,481.45

Based on the approximation method employed in Tables 48 and 49, $739.8M is clawed back from seniors under the status quo claw-back. As shown in Table 50, this is approximately a 5.5% difference from the actual claw-back calculated by the SPSD/M using the applicable tax/transfer algorithms.

Table 50: Option 3: Comparison of status quo claw-back calculations, in millions

	Couples	Singles	Others	Total
Status quo approximation	511.3	228.5	n/a	739.8
Status quo algorithms	541.4	240.7	0.7	782.8
Difference	30.1	12.2	n/a	43.0
As % of algorithm calculation	5.6%	5.1%	-	5.5%