

# On the Replacement Adequacy of Canada's Retirement Income System

- illustrative pension reform scenarios (PM)

(please see notes for more  
explanatory text)

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remarks will be in two parts – this AM will do projections of current system; this PM will explore three illustrative options for reform

## Acknowledgments and Caveats

- huge thanks to the LifePaths team in Statistics Canada's Modeling Division
- financial support over many years from Policy Research Initiative and Federal HRSDC
- full responsibility for the range of assumptions used in this analysis, and interpretation of results – Wolfson
- LifePaths is public domain; to do further simulations, feel free to contact Statistics Canada
- caveat: LifePaths is a complex simulation model, some parts of which are brand new; detailed checking of the new parts is still underway

re doing further LifePaths simulations, contact Steve Gribble, Director, Modeling Division, Statistics Canada 613 951-3766 or [Steve.Gribble@a.statcan.gc.ca](mailto:Steve.Gribble@a.statcan.gc.ca)

## On the Replacement Adequacy of Canada's Retirement Income System - Reform Options

- build on this AM's analysis
  - AW discounting, EAU etc. in definition of net RR
  - focus on 1960-65 birth cohort
  - focus on 50 – 50 imputed rent and annuitization of owner-occupied housing post-retirement
- three reform options
  - two forms of mandatory DB (e.g. C/QPP) expansion
  - wage (instead of CPI) indexing of OAS + GIS + PIT
  - n.b. new opt-out Canada-wide DC plan would be intermediate...
- and a few slides on health and leisure time

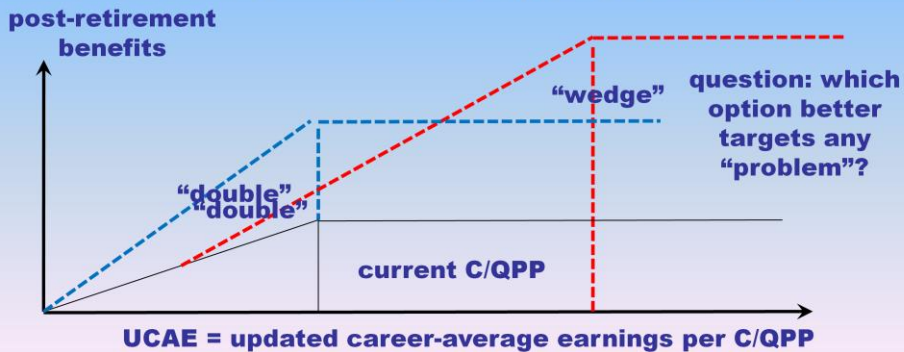
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now let's look at some reform options + some broader context

## Expansion of Mandatory DB Benefits

- “double C/QPP” – increase nominal replacement rate by 25%, no change to YMPE (or to YBE)
- “wedge” – increase replacement rate to 40% starting at  $\frac{1}{2}$  AW and extend up to 2 AW
- cost – proportional to 5.2% payroll for future service cost of current C/QPP retirement + post-retirement survivor

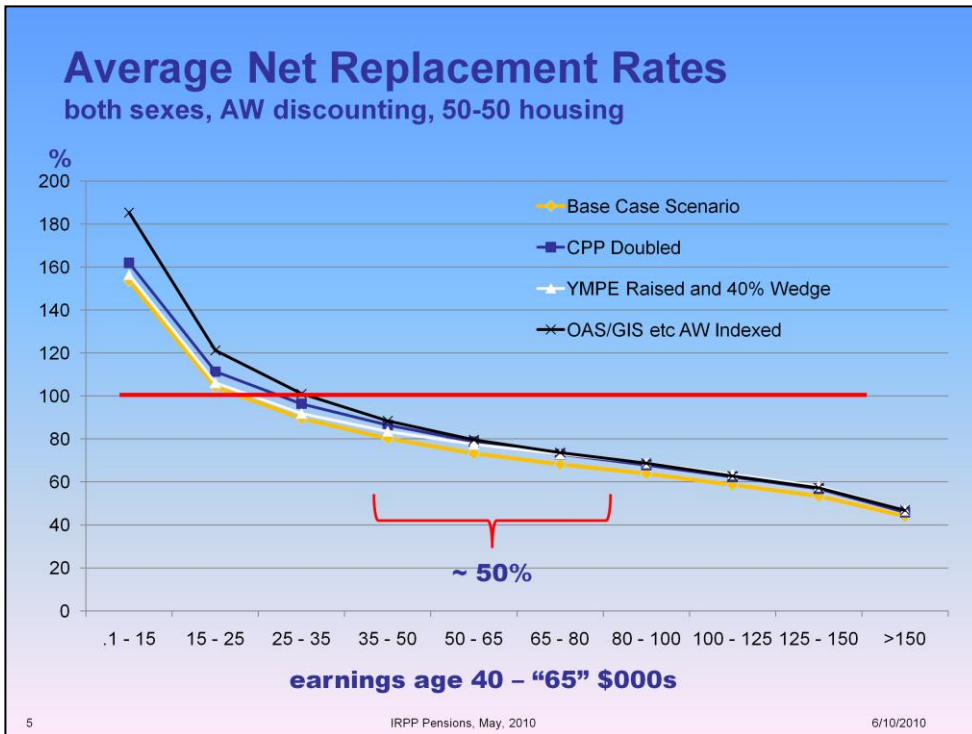


two options for expansion of mandatory DB benefits, for simplicity modeled as C/QPP expansion, though in practice these options can both be separate...

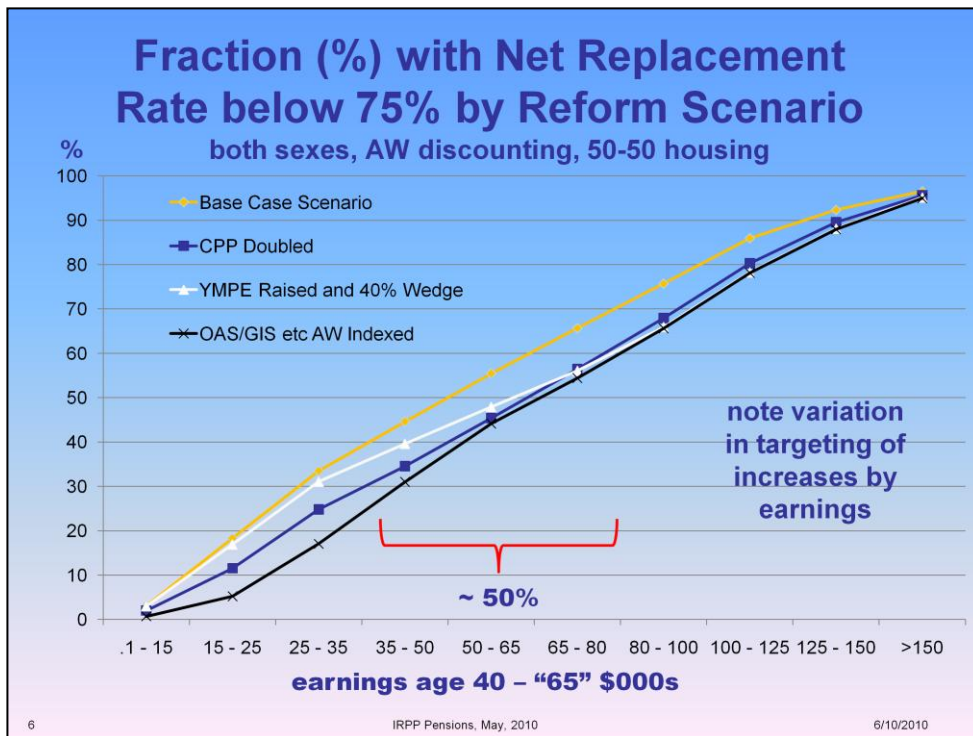
first option, “double”, is essentially that proposed by CLC

wedge is illustrative, but combines elements of a number of proposals – e.g. increase YMPE, increase 25% nominal replacement rate, but don’t increase replacement rate for those with low lifetime incomes since they are already achieving  $> 100\%$  replacement, so start increase in nominal replacement rate at half YMPE

also, for third option, no change to C/QPP, but move OAS / GIS / personal income taxes, but move from CPI to AW indexing



this graph shows avg RRs by income for the status quo + the 3 reform scenarios, but lines rather close together, so let's look at the next graph



perhaps surprisingly (at least to the author) the wedge option is not targeted to the “middle” but rather dominates for the “upper middle” – i.e. over \$80k; doubled C/QPP is in this sense, better targeted

there are many more graphs coming out of the simulations, but given time available, this is all I’ll be showing

## **Digression – Health and Leisure Time**

- claims sometimes made:
  - seniors keep saving, so they do not really need more income
  - seniors are not that healthy, so they are unable to make much use of increased income in retirement
  - seniors have more free time, which can offset their income needs
- fortuitously, LifePaths has also been used in recent years for other (non-pension policy) analyses (n.b. in research mode only)
  - projecting disability and availability of kin support, re future formal long term care needs
  - new social indicator, GLT, in context of OECD project on “measuring the progress of societies”

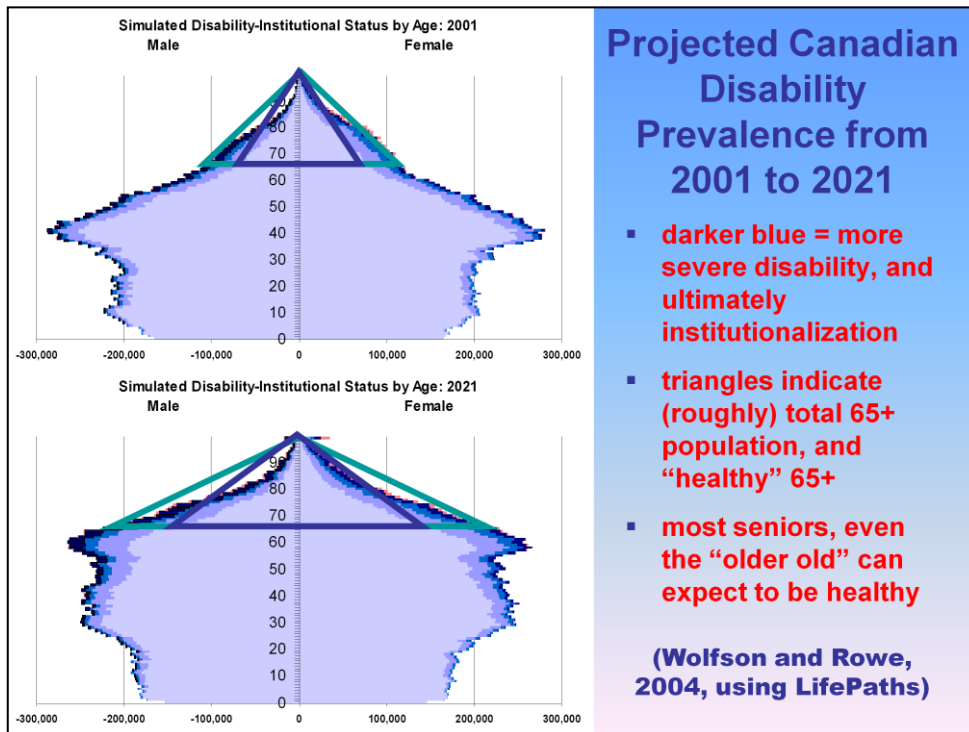
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IRPP Pensions, May, 2010

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but given some of the discussions that have ensued over past few weeks as I've discussed these results with various colleagues, it seems useful to conclude with a few slides placing these results into the broader context of health and leisure time... (e.g. points on top half of slide)

... so let me show one graph on health status, and then a few that get at leisure time



this pair of graphs shows a projection of disability prevalences in connection with Canada’s aging population - two conventional cross sectional population pyramids – the top for 2001, and the bottom projected to 2021.

the colour shading indicates the population distribution by disability status, ranging from the large light blue areas for those who are not disabled at all, through mild, moderate and severe disability, and finally at the outside edge the darkest blue indicating the institutionalized population.

the overall outline of these population “pyramids” (actually more like pears), shows the baby boom bulge moving up to higher ages; not surprisingly, we see some increasing area of darker blues, especially at higher ages; red triangles give very rough indication of the growing numbers of 65+ population, while green triangles roughly indicate those who are in good health.

projections show, not surprisingly, that an aging population will lead to more elderly with some measure of disability; but good news is just how many more healthy elderly we can expect.

## GLT $\equiv$ Good Life Time (rhymes with GDP)

duration of lifetime spent with adequate:

- Time  $\equiv$  at least 3 hours per day spent in “leisure”
  - active leisure – e.g. physical activity +
  - passive leisure – e.g. TV, movies +
  - socializing – e.g. dining out
- Money  $\equiv$  over 2/3rds median family EAU disposable income
- Health  $\equiv$  McMaster HUI > 0.9

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IRPP Pensions, May, 2010

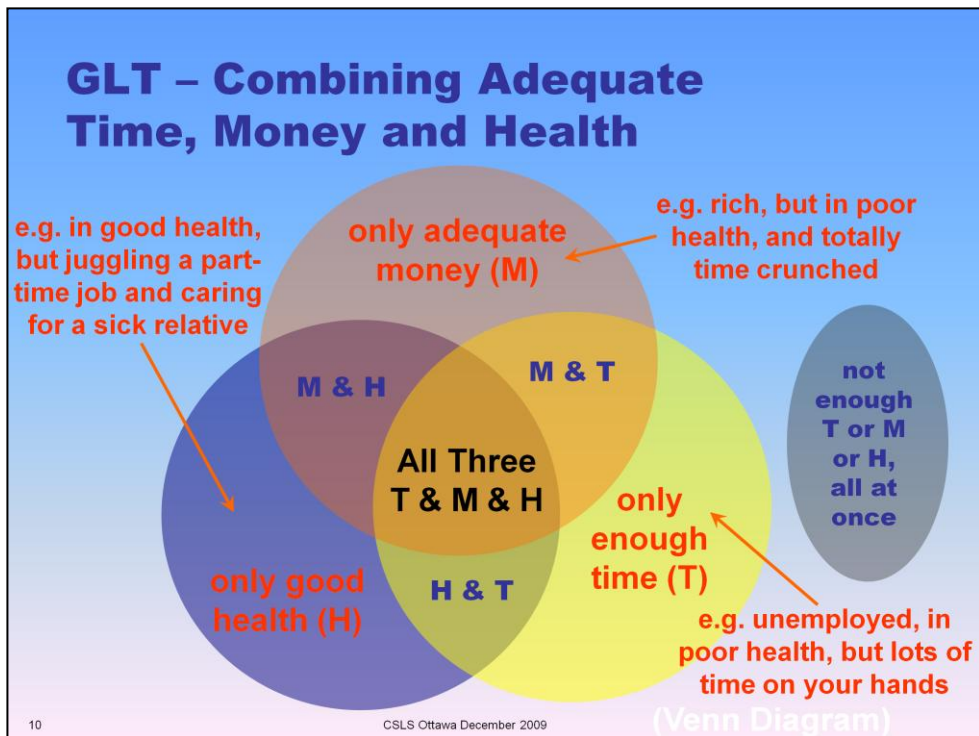
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next, a few slides from our GLT analysis developed in the context of the OECD project on “Measuring the Progress of Societies”

GLT is defined as the portion of individuals’ lifetimes when they have all three of adequate time, money and health

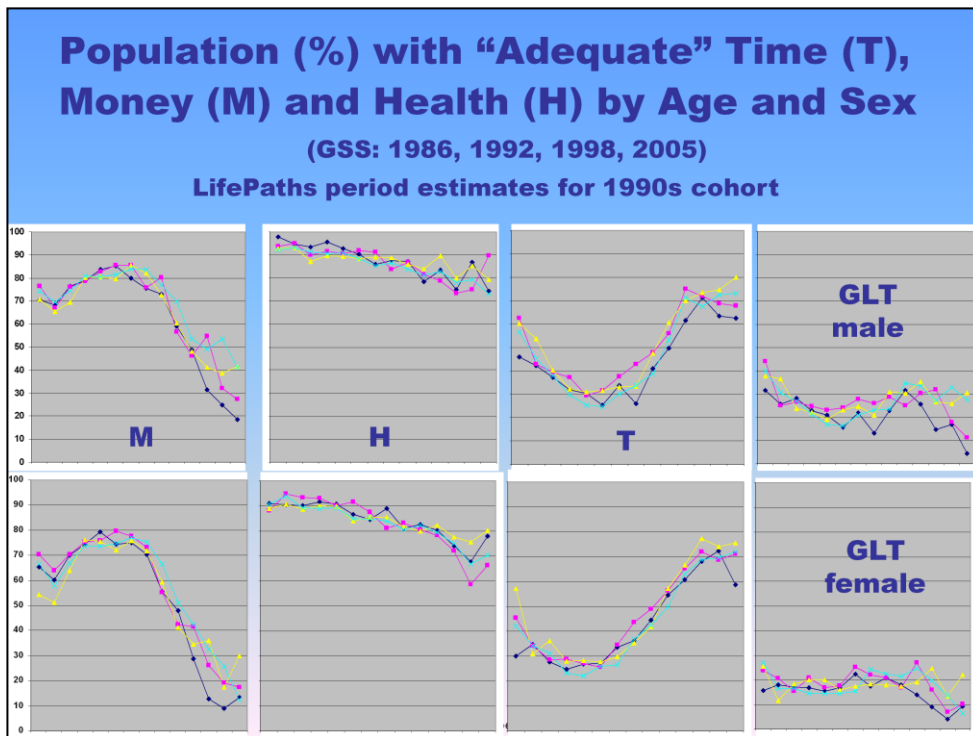
the cut-points that have been used are 3 hours per day of leisure (n.b. averaged over one week, based on 2005 GSS time use survey), etc. (per slide)

the retirement income system adequacy discussion is pertinent for the M (“Money”) portion of the GLT...



GLT is defined as the intersection of TMH, i.e. having adequate time, money and health all at once as illustrated here in a Venn diagram

...



these graphs show prevalence estimates of inadequate time, money, or health – each individually, and then all at once (all with age in 5 year intervals along the horiz axis) data have been approximated from last four GSS time use surveys – “approximated” because the questions used are not quite identical in all four waves of the survey since using 2/3rds of median EAUD family income as threshold, many more seniors are below – OAS + GIS only bring seniors to just over ½ median EAUD family income health (H) follows the expected pattern; while leisure time (T) clearly rises into older age so yes, elderly do have more time, and most are in good health so how should we weigh / judge their income needs post-retirement – over and above the RR data just shown which only compare \$ post ret to \$ pre-ret without taking these other factors – H and T – into account?

## But Leisure Is Not Always the Most Valued Use of Time (2005 GSS)

	all*	males	females	Age Groups			
				15-24	25-44	45-64	65+
Cleaning	2.4	2.2	2.6	2.1	2.4	2.5	2.8
Groceries	2.7	2.5	2.8	2.6	2.6	2.6	2.9
Maintenance	2.9	3.3	2.5	2.6	2.9	3.0	3.1
Other Shopping	3.0	2.5	3.4	3.5	2.9	2.7	2.9
Communting	3.0	3.0	3.0	2.8	3.0	3.2	3.8
Clubs	3.1	3.0	3.1	3.4	3.1	2.9	3.0
Volunteering	3.3	3.0	3.5	3.1	3.2	3.4	3.5
Cooking	3.3	3.1	3.4	3.1	3.3	3.3	3.3
TV	3.3	3.3	3.2	3.4	3.2	3.1	3.6
Social Events	3.5	3.3	3.7	3.8	3.5	3.3	3.2
Movies / Plays	3.7	3.7	3.7	4.3	3.9	3.4	2.9
<b>Paid Work</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>3.7</b>	<b>3.7</b>	<b>3.9</b>	<b>4.2</b>
Dining Out	4.0	3.8	4.1	4.0	4.1	3.9	3.7
Supper at Home	4.0	4.1	4.0	3.8	4.1	4.1	4.1

\* basis for sorting

five-point scale with 1 being "dislike a great deal" and 5 being "enjoy a great deal"

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n.b. a caveat re leisure time

data from the same Canadian time diary survey, perhaps surprisingly, indicate that Canadians derive greater satisfaction from their paid work than all but two leisure time activities – and even more so among those age 65+.

this could be a reflection of two important attributes of people's jobs – (a) there is an important social aspect to the workplace, people enjoy interacting with their work colleagues, and (b) individuals derive important feelings of satisfaction from feeling they are contributing members of society.

we flag this as a topic meriting further investigation. It does not detract from the overall framework being developed; rather it suggests a fruitful direction for elaboration or adjustment.

n.b. Krueger, Khaneman, Schkade, Schwartz and Stone in their 2009 volume on "National Time Accounting: The Currency of Life" find in the "Princeton Affect and Time Use Survey" that paid work ranks much lower for US residents. Maybe the difference is due to the Econ 101 "labour-leisure tradeoff" being a more appropriate characterization of the US labour market than the Canadian ( 😊 ).

## Concluding Comments

- if Houston had a problem before, it is reduced considerably with mandatory DB expansion
- there would be an implicit switch from general revenue funding to payroll tax + pre-funding → much larger accumulation of explicit asset pool
  - but impact on aggregate savings not at all clear
- recall options for more sophisticated inter-generational “contract” – Frith Special Parliamentary Committee
  - public DB benefits depend on (healthy) life expectancy, employment / population ratio, etc.
- ideally, pension policy analysis should be placed in broader context – joint with health and leisure (try LifePaths)

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finally...

n.b. worth going back to read Frith Special Parliamentary Ctte Report (1983) chapter on intergenerational fairness re options for better and more explicitly sharing risks of public / mandatory plans; on this see also “Aging and Intergenerational Fairness – A Canadian Analysis” (MC Wolfson, Geoff Rowe), in Peter Lambert (Ed.) Research on Inequality , 2007.