

Longevity and Retirement: Thinking Outside the Box on Canada's Retirement Income System

- what is an “adequate” retirement income
- is there a problem?
- options for expanding the C/QPP
- discussion: a package proposal

(please see Notes View for more detail)

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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 ...



Criteria for an Adequate Retirement Income System

- avoid poverty / “low income”
- support continuity of consumption / maintenance of living standards into retirement
- provide “safe” pensions = reduce uncertainty (or at least share risks fairly amongst individuals, employers, fellow employees, taxpayers)

“Net Replacement Rate” Defined

- ratio of post-retirement “*consumption possibilities*” to those prior to retirement
- norm or objective: 100%; i.e. ability and likelihood of maintaining pre-retirement living standards after retirement
- “consumption possibilities” \equiv gross income less income and payroll taxes less savings plus dis-saving (i.e. running down assets), adjusted for changes in family size over the life cycle

Will Canada's Retirement Income System be Adequate – in Terms of Net Replacement Rates? **NO**

- about half of the “baby boom” population (those born between 1945 and 1970)
- in the middle 50% of the earnings distribution for their prime working age years (i.e. ages 40 to 65)
- can expect a decline in their NET replacement rate (RR) / consumption possibilities after retirement
- of at least one-quarter

(see: http://www.irpp.org/pubs/IRPPstudy/IRPP_Study_no17.pdf)



Comments on “Net Consumption Replacement Rate (RR)”

- not the same as “gross income RR” or “net income RR”
- gross income RRs are easier to estimate and analyze, but not as close to the desired concept of “consumption possibilities”
- next slide shows basic accounting
- and then a slide showing the joint distributions

Replacement Rate (RR)

Adequacy – Basic Accounting

	Pre-Retirement	Post Retirement
add	earnings	public pensions
		RPP, RRSP and RRIF “income”
	imputed rent on owned home	imputed rent on owned home
		net withdrawals of home equity
subtract	income and payroll taxes	income taxes
	RPP and RRSP contributions	
	mortgage principal payments	
divide	EAU (= equivalence scale)	EAU (= equivalence scale)
result	“consumption” pre-retirement	“consumption” post-retirement

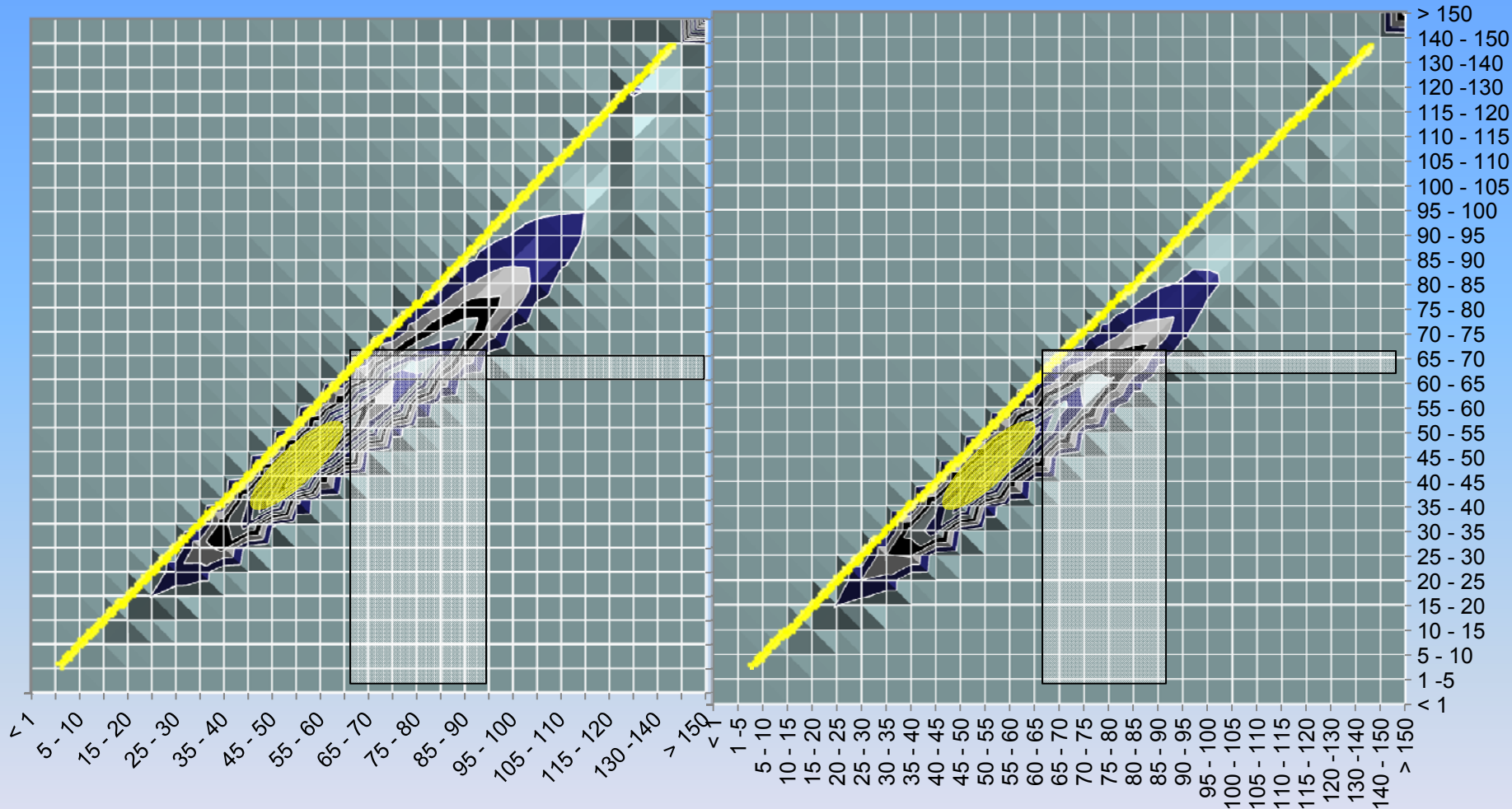
not included: work-related expenses, other investments (income, saving, dis-saving), consumer durables, business assets, inheritances and gifts inter-vivos



Gross versus Net Replacement Rates

females

males



for realistically heterogeneous populations, a 60 to 70% **gross** RR translates into a 60 to 100% **net** RR, so that gross RRs are a poor proxy; better to do analysis directly in terms of **net** RRs

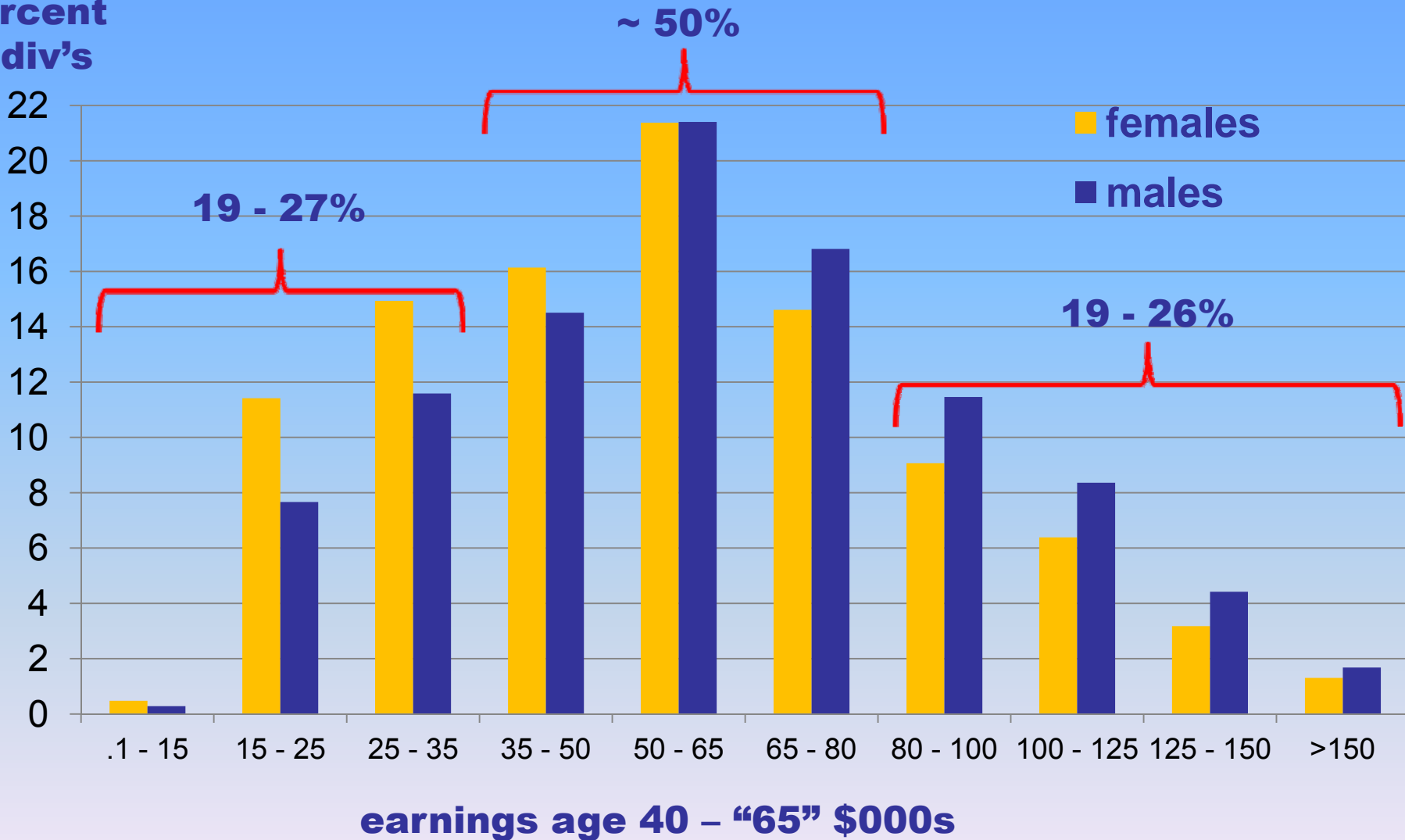


Analytical Method – LifePaths

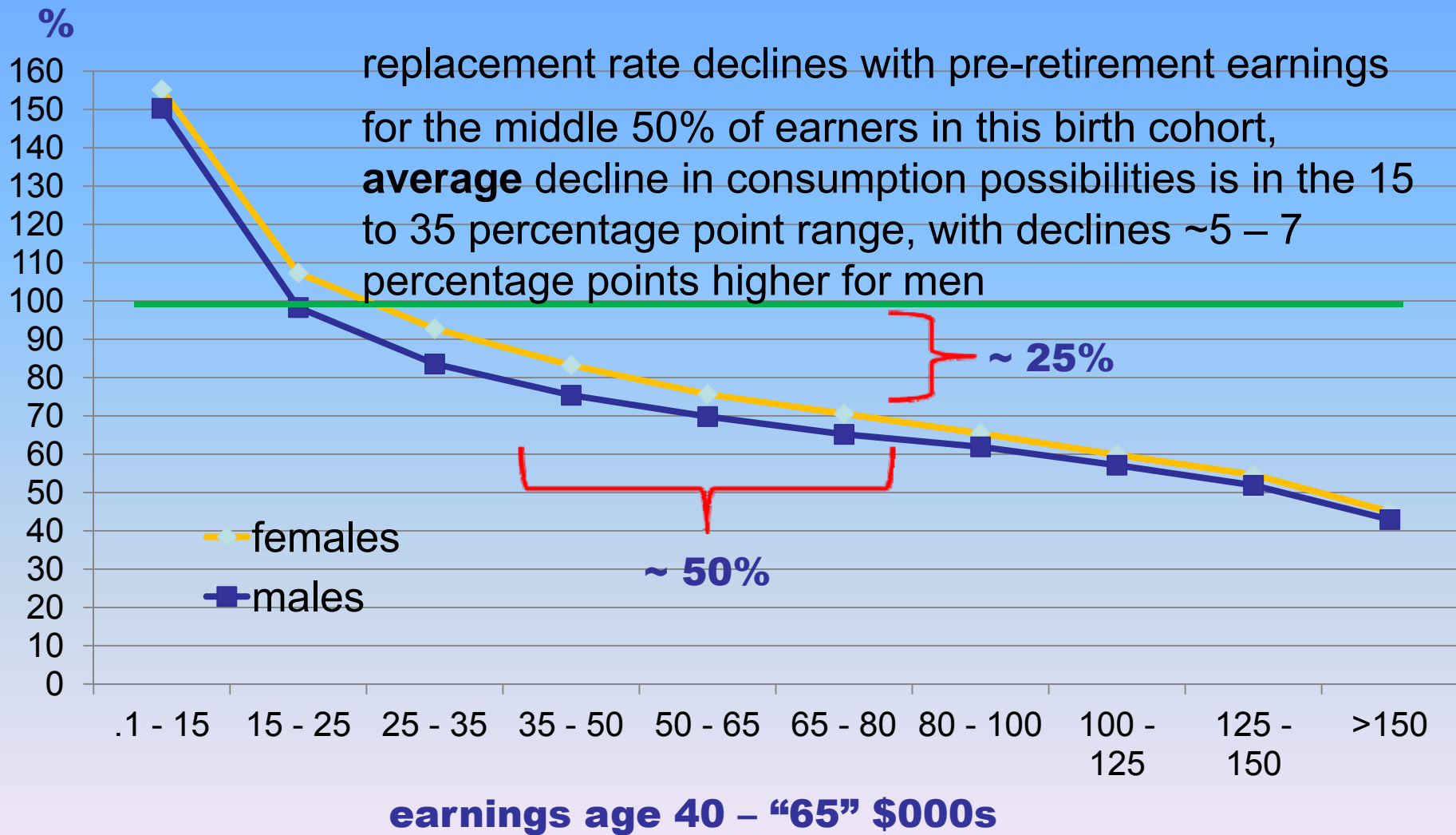
- microsimulation model of the Canadian population and its interactions with the tax / transfer system
- longitudinal dynamics explicitly incorporated, based on integration of analyses of many data sets – including censi, LFS, SFS, FHS, T1, PPIC, etc.
- validation – against historical data, external peer reviews for selected modules
- “as if” ideal longitudinal microdata for huge sample (millions) of the Canadian population – both for the status quo and for selected “what if” scenarios
- results then simply cross-tabulations of synthetic but realistic full lifetime longitudinal population samples

Prime Age (40 – “65”) Earnings

percent
indiv's



Average Net Replacement Rates by Prime Age Earnings – Main Result (1960-65 cohort)



Sensitivity Analyses

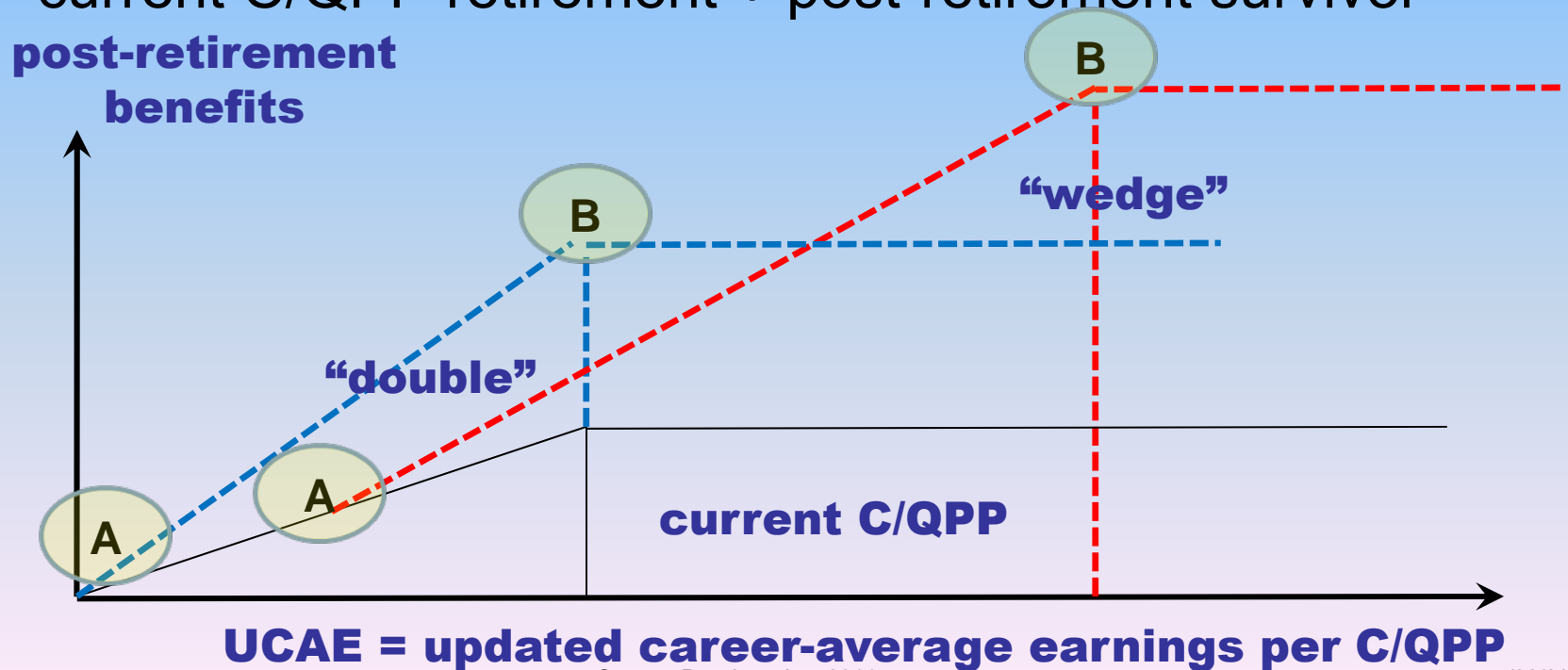
- treatment of owned home
 - ignore / imputed rent only / partial or full sale with proceeds used to purchase life annuity
 - draw-down on value of owned home → higher net RR
- span of working age denominator
 - as in C/QPP (start at age 18) / 40 to 65 / last 5 years
 - shorter and more recent → lower net RR
- deflator for present discounted values
 - wage index or CPI; CPI → higher net RR
- age at which RR assessed
 - 70 or age 80; later → lower net RR
- by birth cohort among baby boomers
 - improving slowly

Options / Challenges

- private sector / voluntary approaches / tax incentives – they simply do not work (given 50 years of trying)
- obvious public sector options – “modest expansion” of CPP (and QPP)
- n.b. what about long run indexing of OAS / GIS / SPA / income tax
- raising age of entitlement to public pensions / “normal age of retirement”
- inter-generational fairness
- “health care represents an even larger unfunded liability than public pensions” (not today)

Expansion of Mandatory DB Benefits

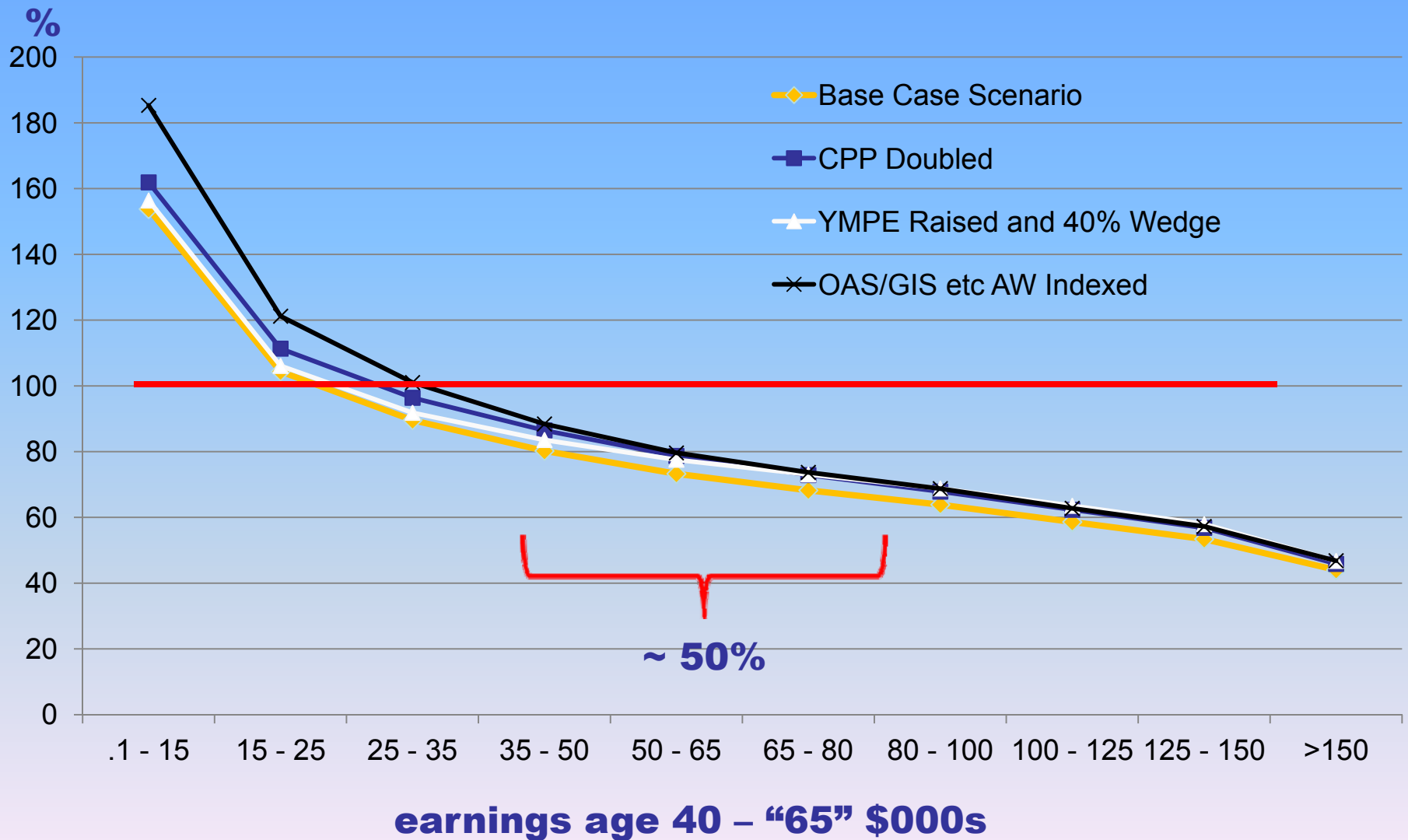
- “double C/QPP” – increase nominal replacement rate by 25%, no change to YMPE (or to YBE) (CLC, since <1980)
- “wedge” – increase replacement rate to 40% starting at 0.5 AW and extend up to 1.5 or 2.0 AW (Wolfson, 1983)
- n.b. parameterized in terms of points A and B
- cost – proportional to 5.2% payroll for future service cost of current C/QPP retirement + post-retirement survivor





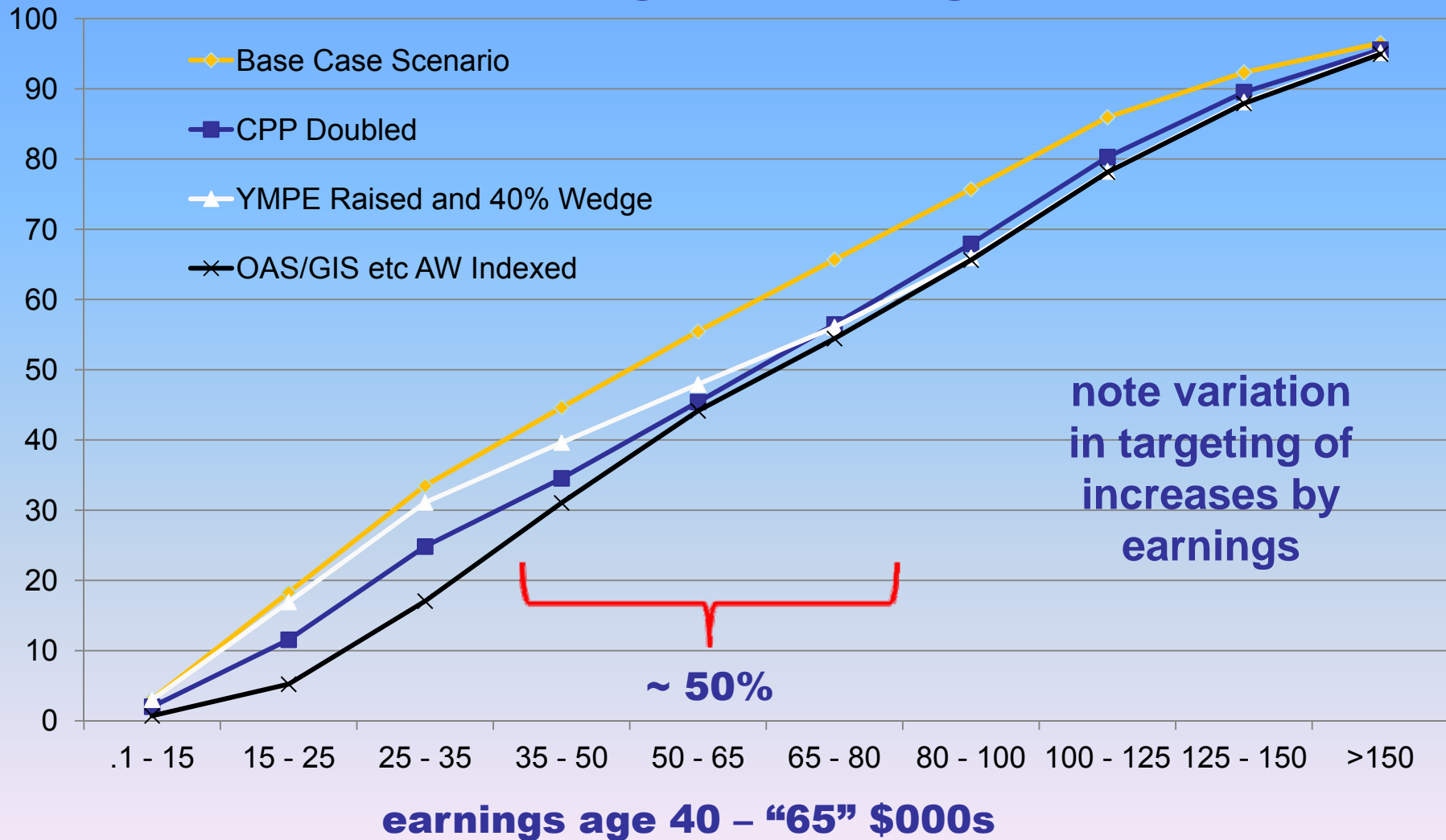
Average Net Replacement Rates

both sexes, AW discounting, 50-50 housing, 1960-65 cohort



Fraction (%) with Net Replacement Rate below 75% by Reform Scenario

% both sexes, AW discounting, 50-50 housing, 1960-65 cohort

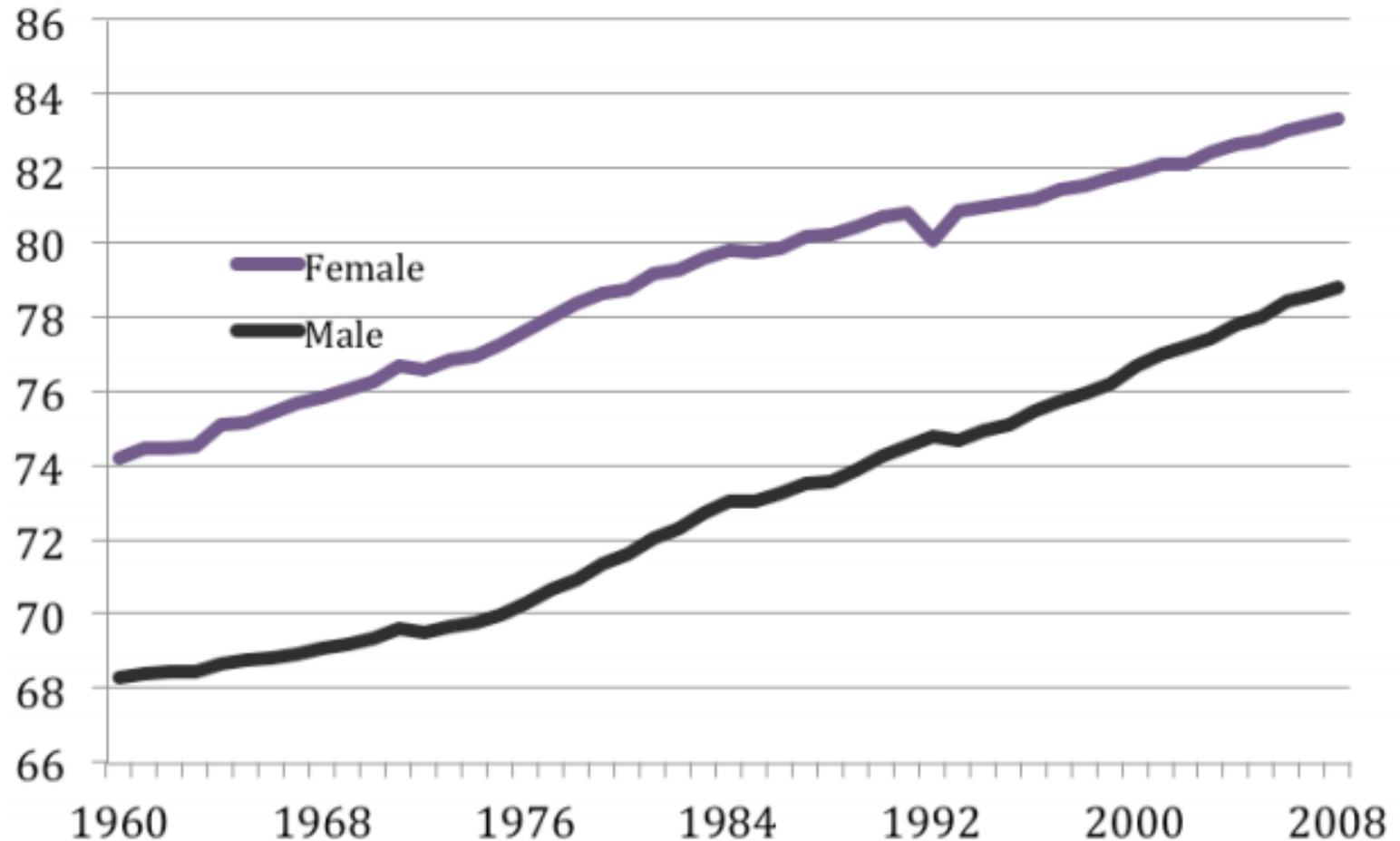


Yikes! Not Much Impact → Time for “Out of the Box”

- doubling C/QPP or doubling YMPE+ does not have that much impact for the 1965-69 birth cohort (starting to reach age 70 in 2035)
- BGO (= “blinding glimpse of the obvious”) – must be due to the gradual phase-in
- so why not more rapid phase-in, say 20 years?
 - creates unfunded liability
 - raises costs
 - intergenerationally unfair
- need quid pro quo – raise normal pension age

Life Expectancy Improvement – A Decade Over 47 Years (?)

Life Expectancy at Birth



Source: Reproduced from Ariizumi and Schirle (2012)

What About the Age of Retirement?

“Nowadays a major current source of structural strain is the long-term failure of our institutions to accommodate the steady rise in the proportion of people who are old. Large strata of older people have been added at the top of the traditional age pyramid, but no comparable activities have been prescribed for them either in the work force or the family; and no adjustments have been made for repercussions in all the other strata. This "structural lag" means (apart from individual dislocations) that human resources in the oldest-and also the youngest-strata are underutilized, and excess burdens of care are imposed upon strata in the middle years.”

**Matilda White Riley, Presidential Address,
American Sociological Association 1986 (p9-10)**

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

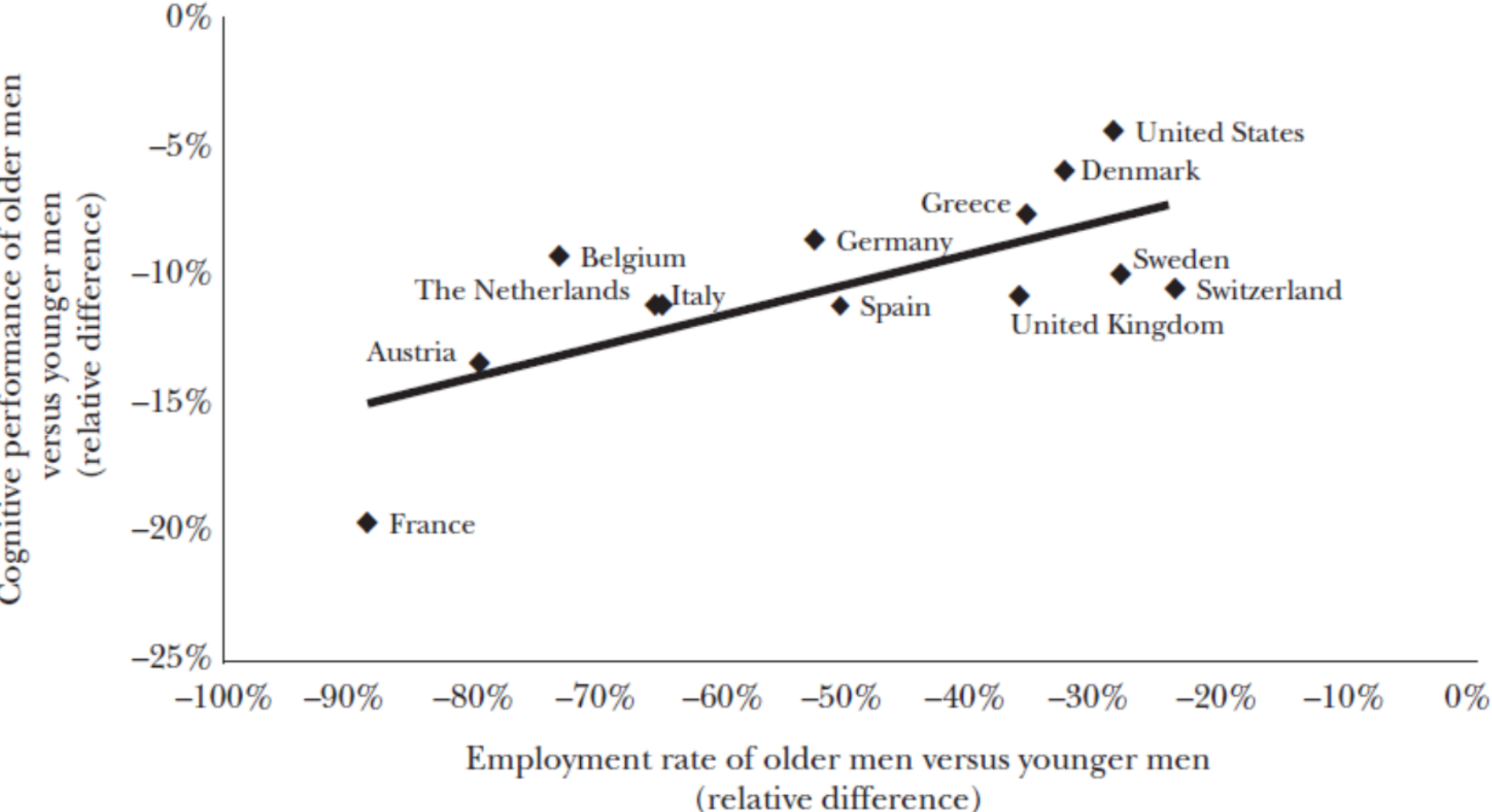
	Age Groups						
	<u>all*</u>	<u>males</u>	<u>females</u>	<u>15-24</u>	<u>25-44</u>	<u>45-64</u>	<u>65+</u>
Cleaning	2.4	2.2	2.6	2.1	2.4	2.5	2.8
Groceries	2.7	2.5	2.8	2.6	2.6	2.6	2.9
Maintenance	2.9	3.3	2.5	2.6	2.9	3.0	3.1
Other Shopping	3.0	2.5	3.4	3.5	2.9	2.7	2.9
Communting	3.0	3.0	3.0	2.8	3.0	3.2	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
Paid Work	3.8	3.8	3.8	3.7	3.7	3.9	4.2
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”

“Use It or Lose It” – Rohweder and Willis, JEP 2010

Drop in Cognitive Performance as a Function of Drop in Employment Rate between Men 50–54 and 60–64 Years Old



Concluding Comments (I)

- LifePaths is an incredibly powerful tool for analyzing major public policy issues
- as widely reported, especially in the environmental domain, also criminal justice – current Government does not like reliable evidence
- Finance ministers' December 2012 meeting was really vague on what they are exploring for their June 2013 meeting on CPP
- indications are that “modest expansion”, while on the table, likely means much less than doubling C/QPP, and zip on more rapid phase-in

Concluding Comments (II)

- this analysis suggests both substantial C/QPP expansion and more rapid phase-in are needed
- and yes, this would raise concerns about costs and inter-generational fairness
- one obvious offset would be raising the normal pension age – e.g. so that the payroll tax increase would be “generationally neutral”
- LifePaths is the obvious tool to undertake the relevant analysis
- will Governments use it?