



DEFUSING THE RELEVANCE OF LIFE SPAN VARIATIONS FOR PENSION SCHEMES

ELMAR STRACKE – PHD CANDIDATE AT THE UNIVERSITY OF BAYREUTH – LOUVAIN-LA-NEUVE – 28 JANUARY 2020



OUTLINE

1. Status Quo of Public Pension Systems
2. Longevity Heterogeneity
3. Sufficiency
4. Conclusion

STATUS QUO OF PUBLIC PENSION SYSTEMS

- Goals:
 - Risk pooling against the risks of longevity
 - Status preservation (→ monthly instalments)
 - Distributive justice
- Fixed retirement age
- Contributions and monthly benefits depending on...
 - Income, labour market participation, residence, etc.
 - Often: *not* on longevity
- Life-time benefits *do* depend on longevity

→ The life-time fairness depends i.a. on the assumption of roughly equal chances for everyone to reach old age

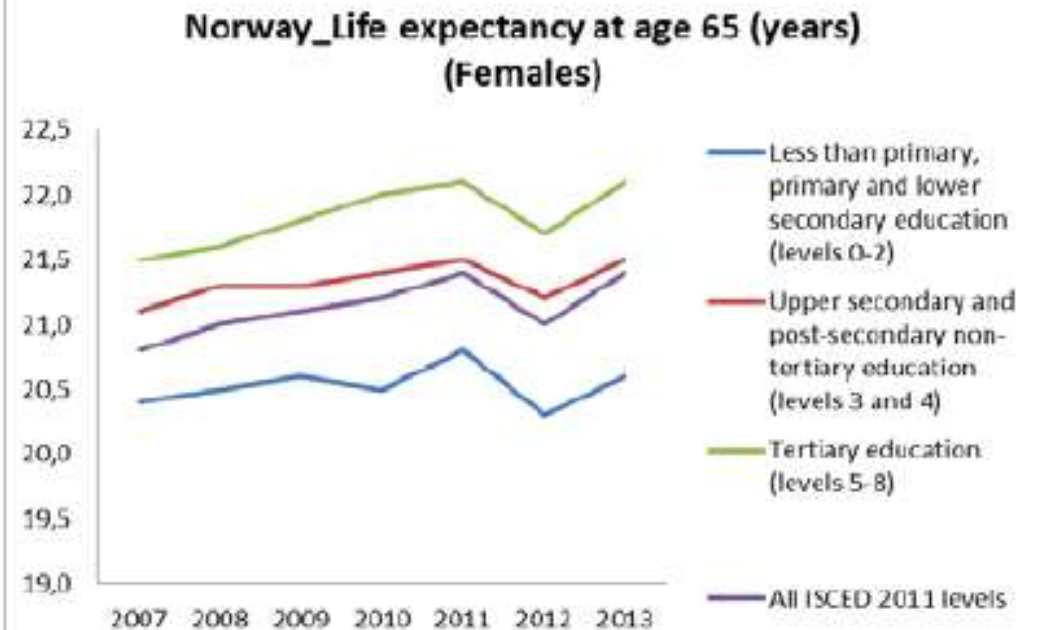
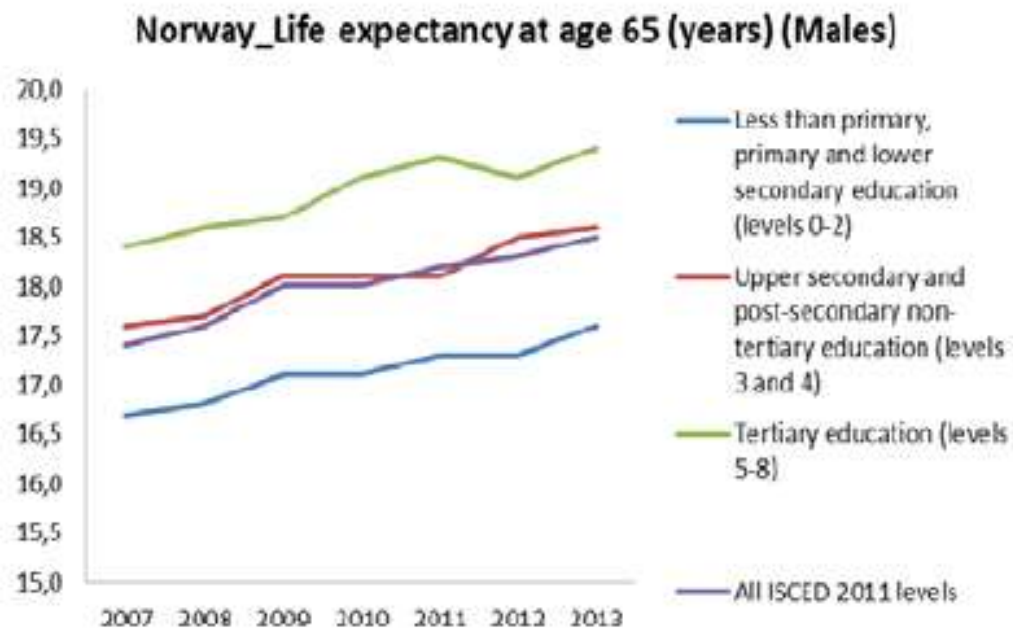
STATUS QUO OF PUBLIC PENSION SYSTEMS

- Life expectancy ↑ + Entry age stable → Pay-out period (life-time) ↑ → Costs ↑
 - Common proposal: Healthy life expectancy ↑ → Entry age ↑
- Aggravated problem of *longevity heterogeneity*

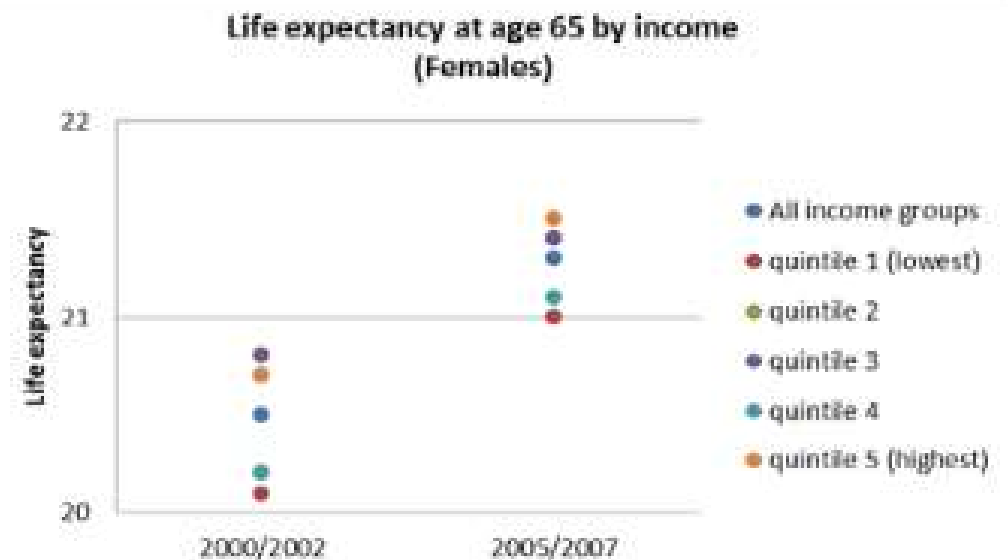
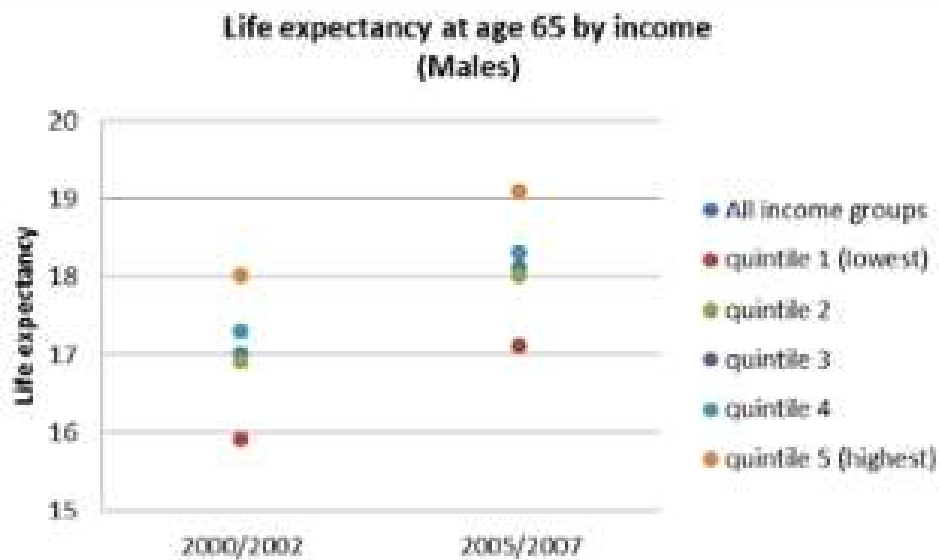
LONGEVITY HETEROGENEITY

- Longevity Heterogeneity:
 - Uneven distribution of life spans.
 - Depending on socio-economic status.
 - Result:
 - Redistribution from low-income to high-income.
 - Implicit tax for low income individuals of up to 20% (Ayuso et. 2016).
 - Swallows redistributive momentum in pension schemes (e.g. Bosworth 2018).
- Pension promise is more valuable for a rich person than for a poor person (Whitehouse and Zaidi 2008).

LONGEVITY HETEROGENEITY – AYUSO ET AL. 2016



LONGEVITY HETEROGENEITY – AYUSO ET AL. 2016



Source: Ayuso et al. based on Statistics Canada, Canadian Vital Statistics, Birth and Death Databases, and population estimates.

LONGEVITY HETEROGENEITY – AYUSO ET AL. 2016

Table 6: Implicit tax/subsidy rates by lifetime income quintiles in the United States^{1/}

Male	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Cohort 1930	-5.3	-3.2	0.0	+6.0	+12.8
Cohort 1960	-21.9	-15.3	0.0	+13.2	+16.2
Female	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Cohort 1930	-0.3	-3.1	0.0	+3.1	+11.7
Cohort 1960	-12.7	-8.3	0.0	+2.2	+29.3

Note:^{1/} Applies for fully actuarial annuity. – signals a tax, and + a subsidy rate. The estimates assume the pension indexation rate is equal to the discount rate.

Source: Authors' calculations based on data from National Academies of Sciences 2015.

LONGEVITY HETEROGENEITY – AYUSO ET AL. 2016

Implicit tax and subsidy rates in the calculation of lifetime annuities by gender in Portugal and Spain, 2014

Age	PORTUGAL		SPAIN	
	Men	Women	Men	Women
50	-8.28%	7.13%	-7.60%	7.23%
51	-8.42%	7.21%	-7.76%	7.36%
52	-8.54%	7.28%	-7.91%	7.48%
53	-8.63%	7.31%	-8.06%	7.60%
54	-8.76%	7.38%	-8.22%	7.73%
55	-8.87%	7.42%	-8.39%	7.86%
56	-8.99%	7.47%	-8.54%	7.97%
57	-9.10%	7.50%	-8.71%	8.10%
58	-9.19%	7.51%	-8.87%	8.22%
59	-9.32%	7.55%	-9.04%	8.34%
60	-9.43%	7.57%	-9.19%	8.43%
61	-9.55%	7.59%	-9.34%	8.51%
62	-9.69%	7.62%	-9.50%	8.60%
63	-9.82%	7.63%	-9.64%	8.66%
64	-9.99%	7.66%	-9.78%	8.72%
65	-10.13%	7.66%	-9.93%	8.77%
66	-10.26%	7.64%	-10.05%	8.80%
67	-10.40%	7.63%	-10.16%	8.80%
68	-10.59%	7.65%	-10.31%	8.83%
69	-10.75%	7.64%	-10.43%	8.82%
70	-10.90%	7.60%	-10.58%	8.84%
71	-10.98%	7.46%	-10.71%	8.83%
72	-11.21%	7.45%	-10.84%	8.79%
73	-11.46%	7.43%	-11.00%	8.78%
74	-11.64%	7.32%	-11.13%	8.71%
75	-11.84%	7.19%	-11.21%	8.60%

LONGEVITY HETEROGENEITY

Moral problems with regards to pension schemes:

- I. Reciprocity between contributions and benefits systematically distorted in a life-time view
 - → Unjust transaction (commutative justice).
 - → Undeserved (dis)advantages (desert-catering egalitarianism).
- II. Focusing solely on monthly income, we might still be unhappy
 - about the implicit redistribution from poor to rich.
 - about a correlation between socio-economic status and entry into pension at all.

WAYS OUT

- I. Inclusion of socio-economic characteristics
 - Follow actuarial fairness rather than other goals (similar to private pension schemes).
 - Huge intra-group variations (→ individual assessments).
 - Administratively difficult.
 - Possible essentialization of sub-groups.



WAYS OUT

- I. Inclusion of socio-economic characteristics
- II. Harmonization of pension levels through taxation and subsidization

WAYS OUT

- I. Inclusion of socio-economic characteristics
- II. Harmonization of pension levels through taxation and subsidization
- III. Ignore the problem

COMMUTATIVE JUSTICE

- Violation of commutative justice or desert-catering view of distributive justice.
- Commutative justice: The pension scheme is morally just if contributions and benefits are in principle equivalent.
 - Aristotelian view: for transaction to be fair the exchanged goods shall be equivalent (Koller 2016).
 - Private pension schemes maintain commutative justice by definition (actuarial equivalence).
- Desert-catering egalitarianism as distributive justice: The pension scheme is morally just if benefits are deserved.
 - Desert as currency of commutative justice.
 - In pension politics, contributions (i.e. income) has been traditionally seen as the currency of desert.
 - Not the dominant view anymore, but even within this thought, longevity heterogeneity is a huge problem (it might aggravate in a contemporary, more holistic view).
 - Commutative Aristotelian justice mirrors desert-catering egalitarian approaches quite well.

DISTRIBUTIVE JUSTICE

- Goals of public pension schemes:
 - Commutative justice:
 - Risk pooling against the risks of longevity → insurance logic
 - Status preservation and differentiation (→ monthly instalments) → insurance logics
 - Distributive justice
 - Redistribution → welfare logics
- Conflicting goals of distributive and commutative justice (e.g. minimum pension levels, Finkler 2018).
- Disentangle commutative from distributive from commutative justice (link to personal contribution/desert).
- Public priority on *distributive* justice.

SUFFICIENTARIANISM

- Goodness derived from absolute (minimum) standards
- Sufficiency threshold alters the conception of justice
 - Those below should have priority (“*positive thesis*”).
 - Allocation above ...
 - Don’t matter at all (“*negative thesis*”) (Casal 2007).
 - Are to be judged by a different standard (matching our moral intuitions, cf. Gaertner and Schokkaert 2011, 70ff).

→Sufficientarianism holds that a distribution is just when everyone has *enough* (Arneson 2013).

SUFFICIENTARIANISM

	Group 1	Group 2	Aggregate
A	10	30	40
B	20	20	40
C	21	50	71

	Group 1	Group 2	Group 3	Aggregate
A'	10	30	1	41
B'	20	20	1	41
C'	21	50	1	72
D'	21	45	5	71

Preference	(Deontic) Egalitarianism	Utilitarianism	Prioritarianism	Sufficientarianism (Threshold: 18)
I	B	C	C	B or C
II	B'	C'	D'	B', C' or D'

SUFFICIENTARIANISM AND PENSIONS

- Public pension schemes from a sufficientarian point of view
 - do not insure against a *lower standard* of living,
 - do insure against not having *enough* (against a *too low standard*).
 - No or less of a duty for resource allocation above the sufficiency threshold.
 - Commutative justice (contributions-benefits equivalence) is not morally relevant.
- Longevity heterogeneity is not morally relevant.

SUFFICIENTARIANISM AND PENSIONS – IN PRACTICE

- Commutative justice on top of the “sufficient” state pension
 - Disentangle commutative from distributive justice.
 - Can still be facilitated by the state.
- Means-tested or not
 - Everyone should be above the threshold, not everyone should receive a certain amount.
 - Scheme is becoming even more progressive.
 - Sufficientarian paradigm: No problem with undeserved pension income.
 - Which in any case will be quite low (vis-à-vis administrative costs etc.).

SUFFICIENTARIANISM AND PENSIONS – SIDE-EFFECT

- Highly progressive:
 - Benefits uniform
 - Contributions still income-related (tax-related)
 - De facto: low-income people will receive an implicit subsidy
- Promising answer to life-span differences, although not concerned with them.

SUFFICIENTARIANISM AND PENSIONS – CHALLENGES

- Difficulties to define the threshold (Stracke 2016)
 - Criteria: non-ambiguous, not over-demanding, not under-demanding, aspect pluralism...
 - Start: existent thresholds such as minimum wage, poverty line etc.
- Societal resistance: weight of commutative justice in conservative welfare states (Mau 2014).
- General problems of system change in pension policies (path dependencies, legal claims etc.).
- Problems concerning entry into pension.

CONCLUSION

- Pension schemes on multiple pillars:
 - Main pillar: Distributive justice from a sufficientarian perspective
 - Commutative justice and longevity heterogeneity of little or no relevance.
 - Implicitly progressive and thus outweighing some effects of longevity heterogeneity.
 - Supplementary pillar: Commutative justice
 - Facilitated by the state or not.
- Some similar real-world cases, but usually a long way to go.

THANK YOU + LITERATURE

Thank you for your attention!

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