ARC CENTRE OF EXCELLENCE IN POPULATION AGEING RESEARCH

The Norwegian Pension Reform: An External Assessment

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Outline

1. **Pension system and the reform**
   - System design – 3-pillar framework
   - Key elements of the reform
2. **Assessment of the reform**
   - Sustainability and affordability
   - Labour supply effects
   - Adequacy and distributional effects
3. **Conclusions**
   - Overall assessment
   - Remaining issues
   - Policy recommendations

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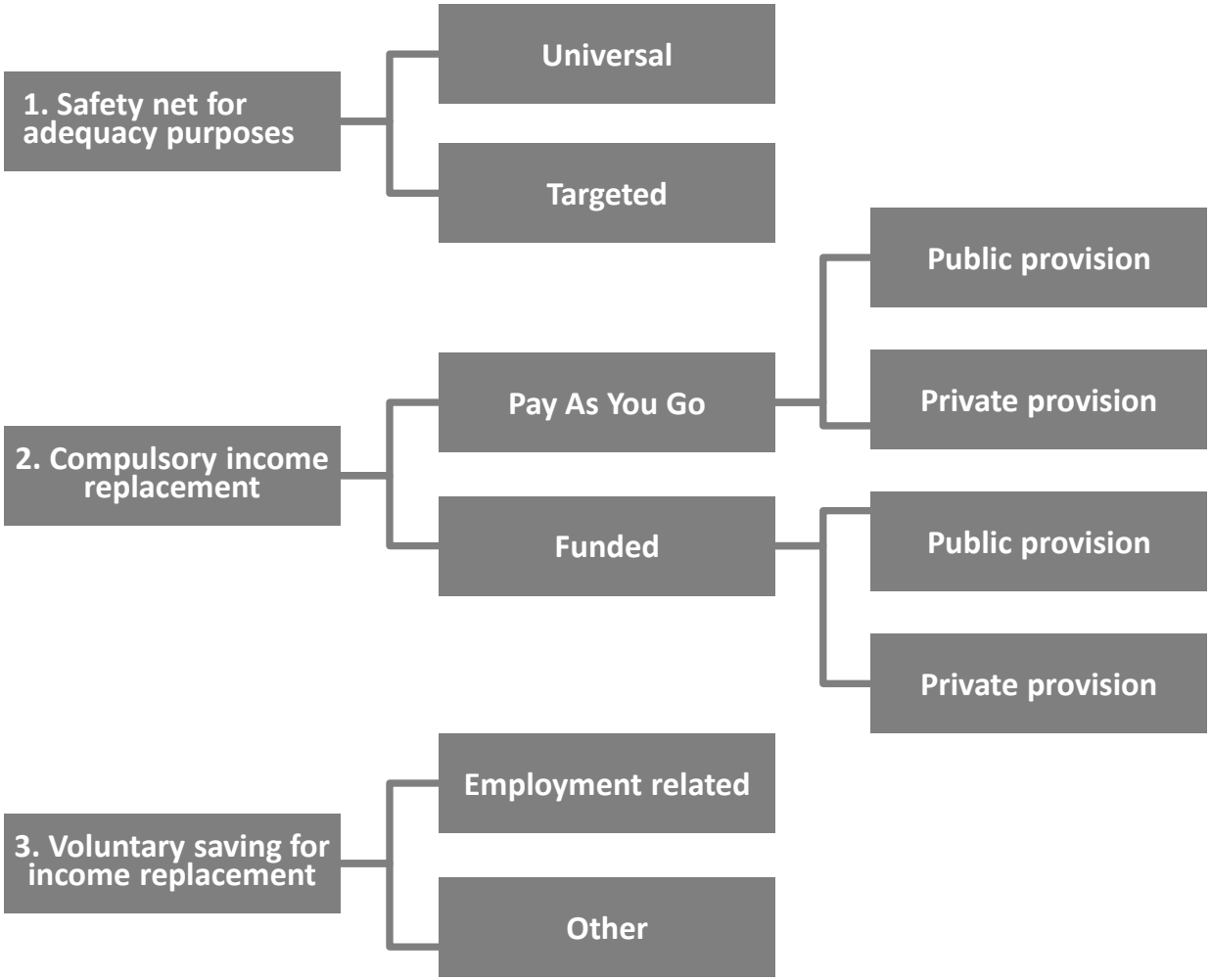
1.Pension Design - Options



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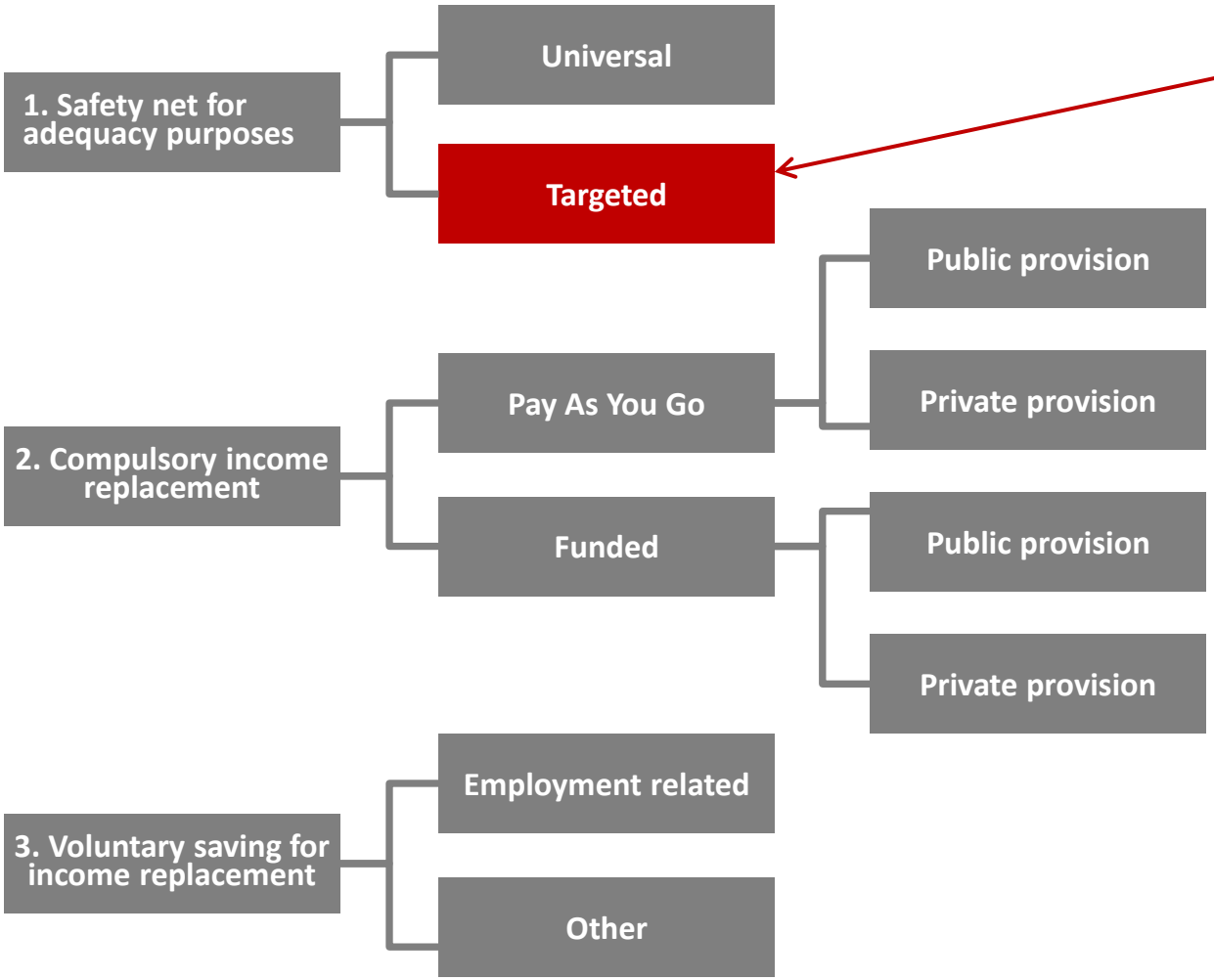
1.Pension Design – Norway's First Pillar



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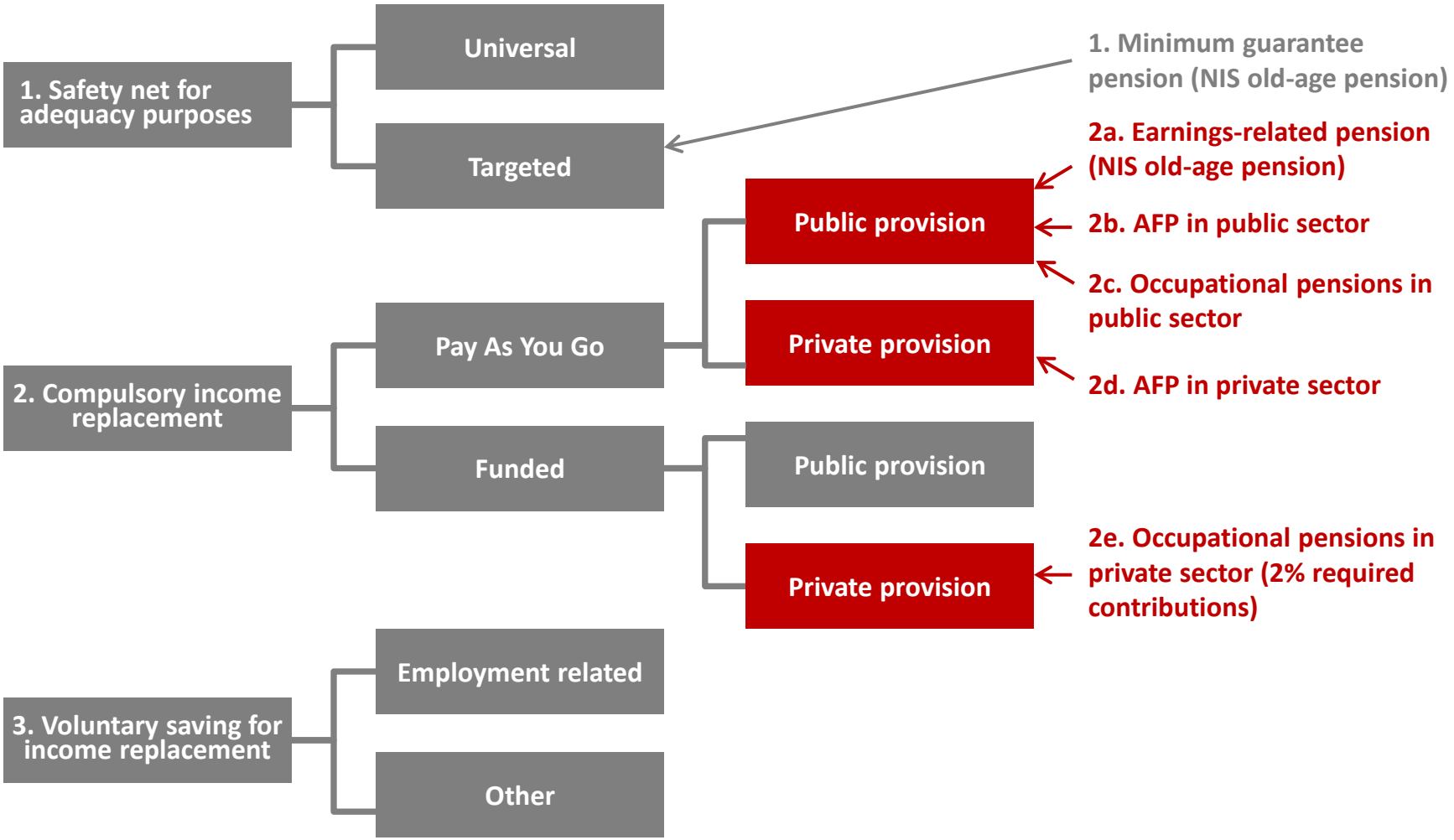
1.Pension Design – Norway's Second Pillar



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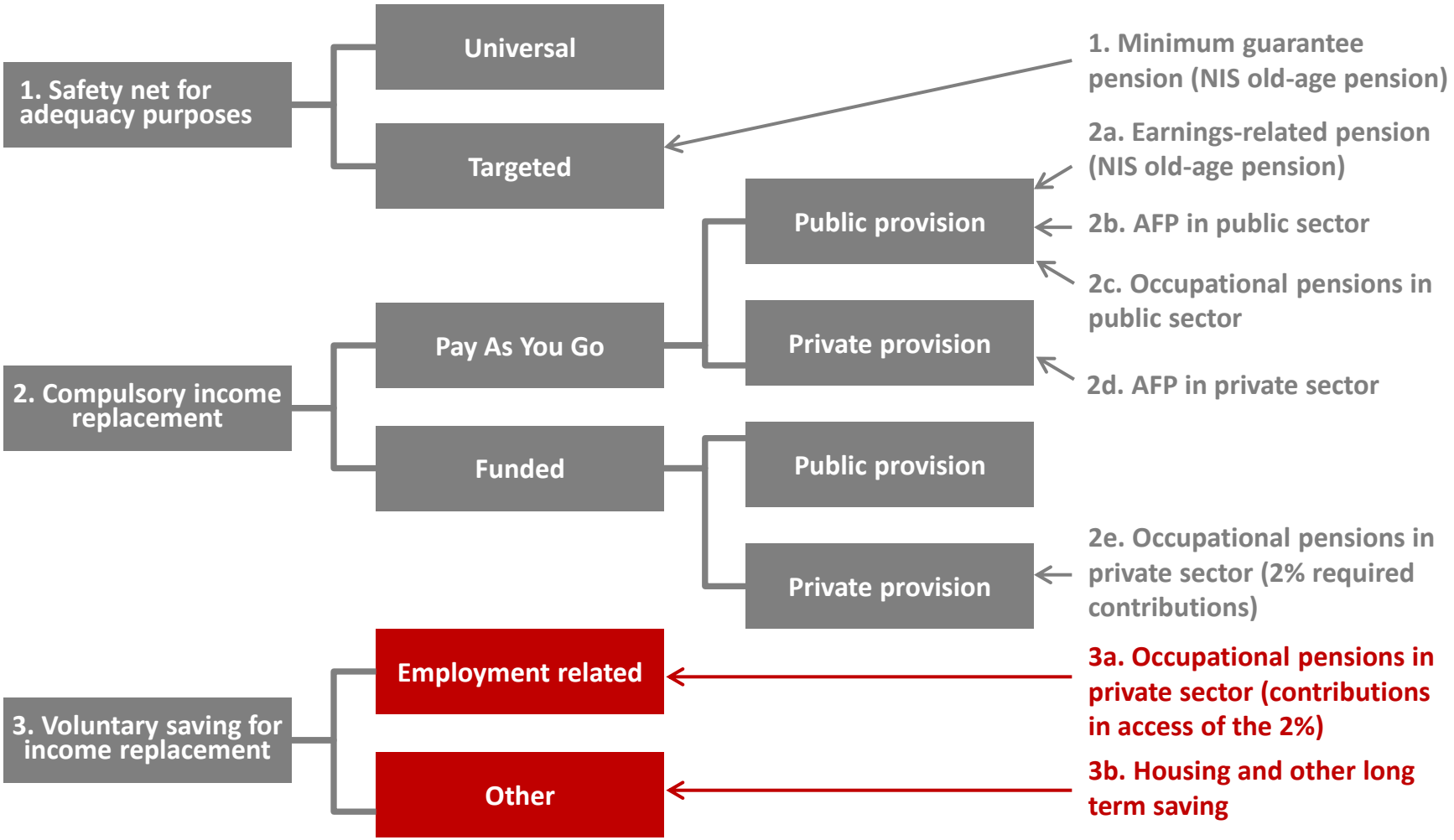
1.Pension Design – Norway's Third Pillar



1. Norway's Three-Pillar System

- **First pillar**
  - **Minimum guarantee pension** (component of NIS old-age pension, non-contributory, pay-as-you go financed, single and couple rates, income tested)
- **Second pillar**
  - **Earnings-related pension** (component of NIS old-age pension, reformed)
  - **AFP in public sector** (not reformed)
  - **AFP in private sector** (reformed)
  - **Occupational pensions in public sector** (DB, not reformed)
  - **Occupational pensions in private sector** (mostly DC, reformed)
- **Third pillar**
  - **Voluntary occupational pensions** (contributions in excess of minimum 2%)
  - **Other voluntary saving** including assets outside pension system and housing

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1. Former Pension System

Public Old-Age Pension Scheme (NIS)

- Established in 1967
- Mandatory, pay-as-you-go, DB pension scheme
- Access age - 67
- Minimum guarantee component (2G single/1.85G married pp, Income tested - 100% taper, residency requirements)
- Earnings-related component (based on pension points)

Early Retirement Scheme (AFP)

- Established in 1988
- Covers all public sector & 50% private sector workers.
- Access age - 62
- Pension paid up to 66, benefit similar to NIS old-age pension
- Stick earnings test

Occupational Pensions

- DB schemes mainly for public sector employees, targeting gross (combined) replacement rate of 66% of final wage
- DC schemes not allowed until 2001

1. Reform Process – Public Old-Age Pension

- 2001: **Pension Commission** appointed
- 2004: **Pension Commission derived final report**
  - Focus mainly on fiscal sustainability and work incentive objectives
- 2005: **First parliamentary pension settlement**
  - Decision on main principles of a new pension system
- 2007: **Second parliamentary pension settlement**
  - Broad support for pension reform with some adjustments addressing redistributive measures
- 2008-10: **Removal of earnings test** against earnings of those 67-69
- 2009: **Parliament** approved reform with broad majority
- 2011: **Reform implemented**
  - Key elements such as life expectancy adjustments of benefits, flexible retirement and new indexation rules implemented in 2011
  - New notional defined contribution (NDC) model for accumulation of pension entitlements introduced gradually

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1. Reform Process – AFP & Occupational Pensions

AFP for private sector workers

- 2008: **Renegotiation of private sector AFP**
- 2011: **New private sector AFP implemented**
  - The scheme reformed into actuarially fairer system with similar objectives (sustainability and work incentives) to public old-age pension

Occupational Pensions for private sector workers

- 2001: **New tax legislation on DC occupational pensions**
  - Same preferential tax treatment as previously applied only to traditional DB schemes.
- 2006: **Occupational pensions made mandatory**
  - Minimum employer contributions of 2% of annual wage for those with earnings 1G to 12G
- 2014: **Ceilings on voluntary contributions lifted**

1. Pension Reform – Public Old-Age Pension

1. **New NDC model** for accumulating pension entitlements

- Annual pension accrual of 18.1% of labour earnings up to 7.1G (other entitlements for special periods and circumstances also in place)
- Removal of maximum 40 years for full pension, the “best 20 year” rule and minimum income threshold of 1G for accumulating pension entitlements
- Introduced partially for those born after 1953 and fully for those born after 1962 (transitional rules in place for those born after 1953 and before 1963)

2. **Flexible retirement** from 62 to 75

- Only for those with enough pension entitlements to achieve higher earnings-related pension than minimum pension guaranteed at age 67
- Pension allowed to be drawn fully or partially at 20, 40, 50, 60, 80% of full pension
- No earnings test against labour income of working recipients of pension benefits
- Continued work after having started pension draw-down to yield additional pension entitlements

1. Pension Reform – Public Old-Age Pension (con't)

3. New life-expectancy adjustments of pension benefits

- Pension wealth of accumulated entitlements (adjusted yearly based on wage growth) converted into annuity over expected remaining lifetime
- Uniform annuity conversion factors for ages 62 to 75 determined for each cohort at age 61

4. New pension indexation rules

- Earnings-related pension indexed to annual wage growth less 0.75 percentage points
- Minimum guarantee pension indexed to annual wage growth reduced by factor of 0.5% per year, reflecting expected annual increase in life expectancy at age 67

5. Relaxed income test of minimum guarantee pension

- Income test applied to minimum guarantee pension against earnings-related pension relaxed – withdrawal (or taper) rate reduced from 100 to 80%

1. Pension Reform – Private Sector AFP

1. New lifelong top-up pension

- Lifetime top-up of typically just over 20% of public old-age pension
- Accessible at age 62 but only in combination with public old-age pension

2. New model for calculating pension entitlements

- Each year of labour income from age 13 to provide lifelong pension promise of 0.314% of income up to 7.1G – equivalent to annual contributions of 3.5-4% (Hippe and Voien, 2014)

3. New life-expectancy adjustments

4. Earnings test removal

- Strong work incentives from lower implicit marginal tax rates (Hernæs et al., 2016)

5. Strict eligibility criteria

- Employment in a company covered by AFP scheme for at least 7 out of last 9 years before age 62 and for last three years before retirement

1. Pension Reform – Current Occupational Pensions

1. Minimum contributions and ceilings

- Minimum contributions of 2% of annual wage for employees with earnings between 1G and 12G (for DB schemes, contributions such that they guarantee benefits of at least the same level), but typical contributions in excess of the 2%
- Contribution limits on DC occupational pensions - 7% of annual wage between 0 and 7.1G, plus 18.1% of annual wage between 7.1G and 12G (since 2014)

2. Taxation treatment

- Occupational pensions taxed under the EET regime with contributions and fund's earnings exempt from taxation, but benefits treated as normal taxable income
- Employer contributions fully tax-deductible but employers have to pay social security contributions on occupational pension contributions (OECD, 2015a)

3. Access age and other rules

- Access age reduced from 67 to 62 years
- Rules related to payout options prohibit lump-sum withdrawals and only allow lifetime annuity or annuity at least until age 77

2. Assessment of Norway's Pension Reform

- Norway's structural reform evaluated against the OECD key objectives with particular focus on

1. **Fiscal sustainability**
   - through life expectancy adjustments of pension benefits and changes to pension indexation rules
2. **Labour supply effect**
   - by strengthening the relationship between pensions and former labour income and though flexible retirement based on actuarial rules
3. **Adequacy and equity**
   - through changes to the public old-age pension for low income earners and through also changes to private occupational pensions for young and future generations

2. Sustainability – Pension Expenditure & Fiscal Gap

The fiscal impact of the reform

	2013	2020	2060
Old-age pension expenditure *(as % of mainland GDP)*			
Before reform	6.3	7.6	12.8
After reform	6.3	7.4	9.4
Relative difference (in %)	-	-2.6	-26.6
Fiscal gap *[a] (as % of mainland GDP)*			
Before reform	0	-3.6	8.7
After reform	0	-4.4	2.8
Relative difference (in % points)	-	-0.8	-5.9

Source: Fredriksen et al. (2015).

Note: Medium life expectancy assumed; [a] Defined as deviation between the simulated government budget deficit and the deficit consistent with fiscal rule.

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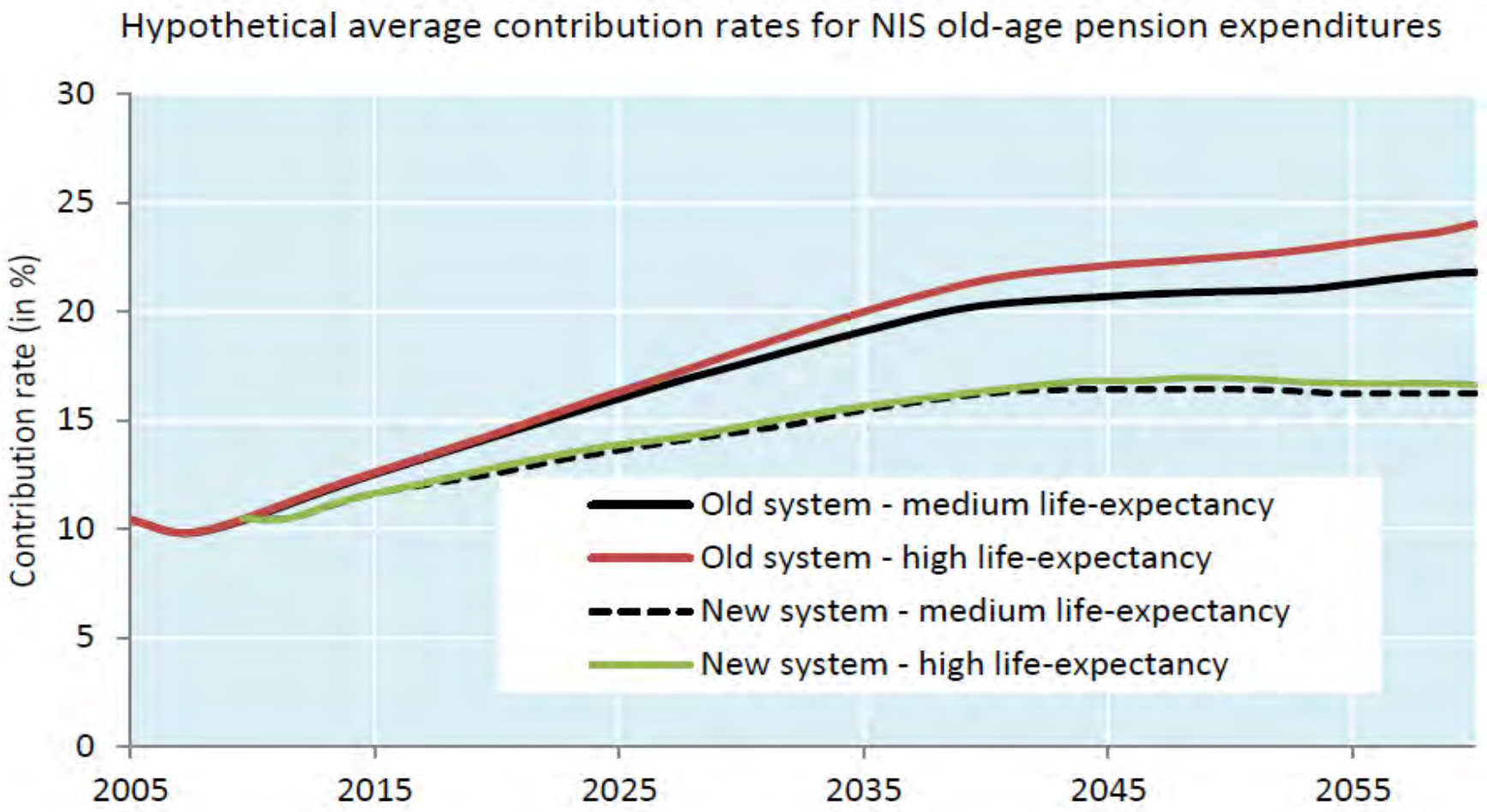
2. Sustainability – Contribution rates

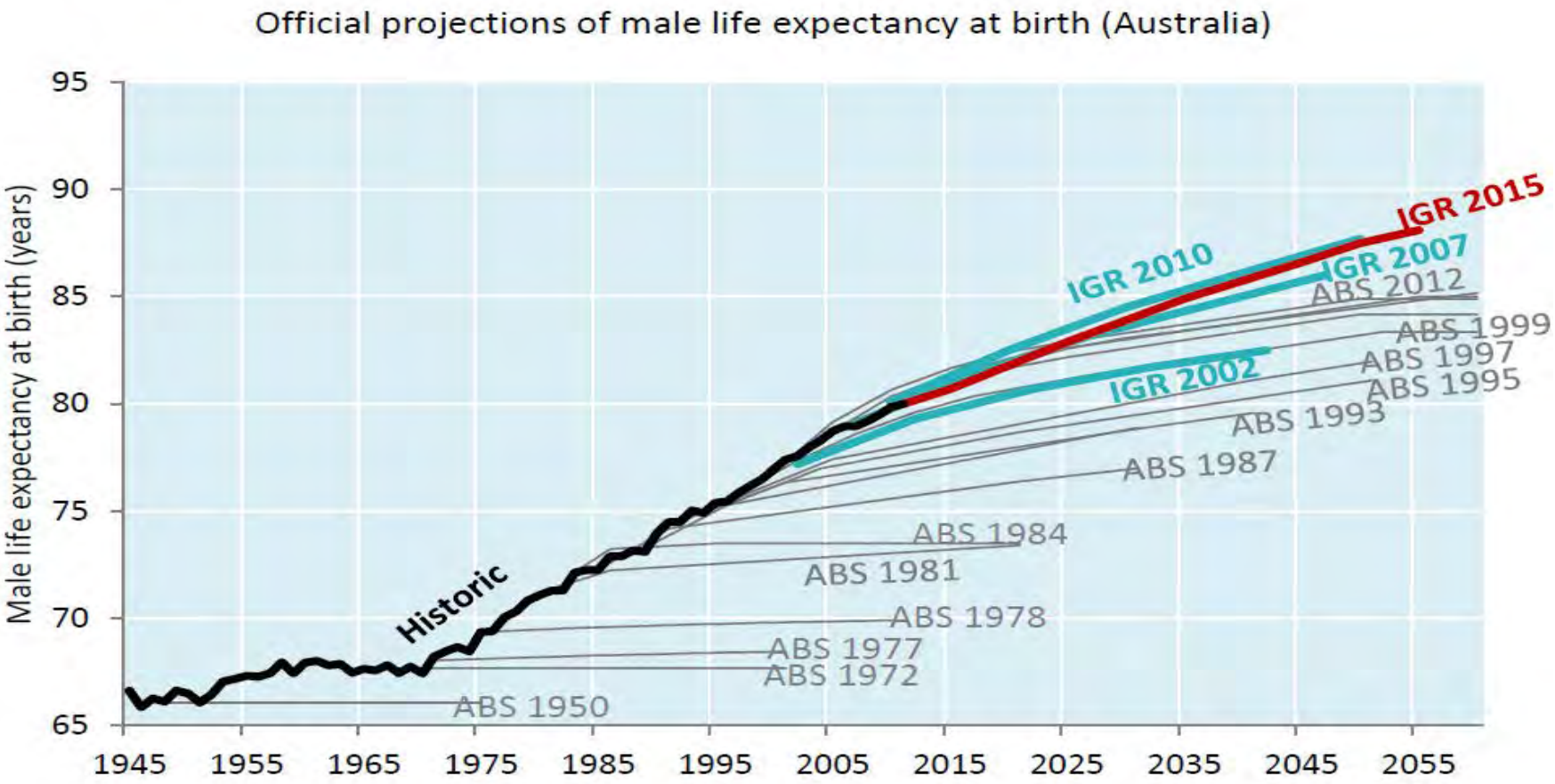


Source: Statistics Norway taken from Christensen et al. (2012).

2. Sustainability – Assessment and comments

- The reform expected to lower pension expenditures and increase tax revenues (driven by strong labour supply effects) –> having significantly positive impact on fiscal sustainability
- **But**
  - Overall public pension costs expected to increase to 14% of GDP by 2050 (OECD average of 11.7% in 2050) (OECD, 2013a)
  - Social security contributions too low to finance social security expenditures even now
  - Uncertainty about how to fund future public pension costs
  - No automatic mechanism to account for future macroeconomic and demographic risks
  - Only partial coverage of longevity risk as annuity factors are determined only once for each cohort at age 61

2. Sustainability – Longevity risk



Source: CEPAR (2015).

Note: ABS=Australian Bureau of Statistics, IGR=Intergeneration Report.

2. Labour supply effect – Work incentives

- The reform expected to have positive impact on **total labour supply** due to:

1. Closer connection between pension benefits and former earnings and its impact on working hours prior to retirement
    - Pension entitlements to accumulate from first Krone earned, compared to labour income of 1G needed under the old rules
    - Maximum 40 year period and best 20 year rules for accumulation of pension entitlements abolished
    - Earnings ceiling for full accumulation of pension entitlements increased from 6G to 7.1G
    - Income test of minimum guarantee pension against earnings-related component relaxed, with taper rate reduced from 100 to 80%
2. Longevity adjustments of pension benefits and flexible retirement and their impacts on postponing retirement

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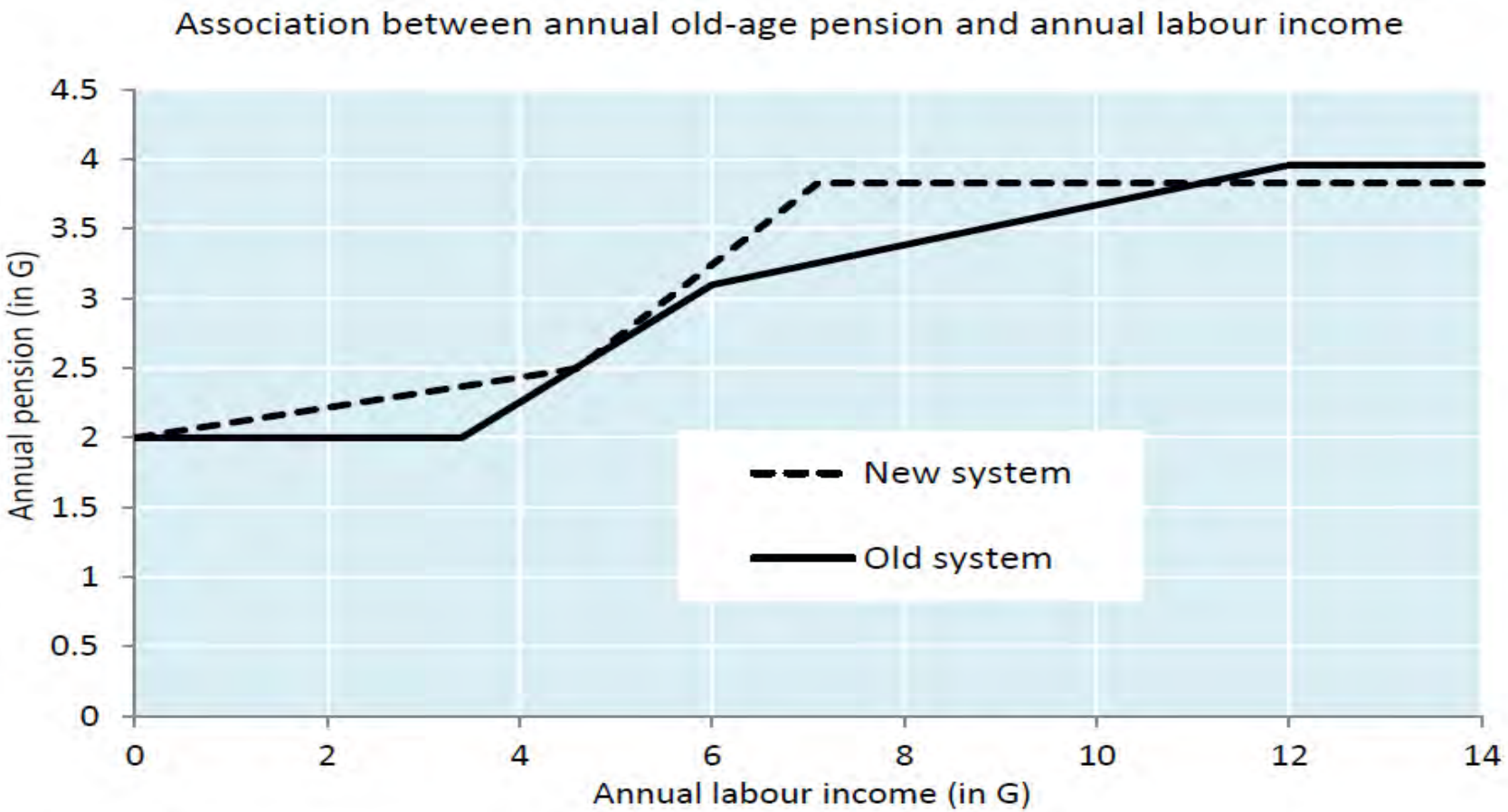
2. Labour supply effect – Work incentives (con't)



Source: Fredriksen and Stølen (2015).

Note: Calculations based on single person with constant labour incomes for 40 years.

2. Labour supply effect – Results from Literature

Labour supply effects of Norway's pension reform

Study	Labour supply (working-age)	Retirement (immediate)	Retirement (long-term)	Total labour supply
Stensnes (2007)	2.50%	-	-	-
Holmøy and Stensnes (2008)	2.50%	0.6 years	2.47 years	11% [a]
Christensen et al. (2012)	2.50%	0.24 years	-	6.8% [b]
Fredriksen et al. (2015) & Fredriksen and Stølen (2015)	2.50%	0.24 years	2.74 years	7.1% [c]
Hernæs et al. (2016)	-	[d]	-	-

Note: [a] Total labour supply effect of 11% in 2050 includes indirect effect of 3.4% due to reduced payroll tax rate; [b] More than 4% in total labour supply increase of 6.8% in 2050 is due to postponed retirement; [c] Total labour supply effect is for year 2060; [d] Significantly positive labour effects along both extensive and intensive margins for groups of private sector workers with AFP entitlements.

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2. Labour supply effect – Assessment & comments

- The reform expected to have strong labour supply effects along both intensive margin (higher working hours) and extensive margin (postponed retirement)
- Significantly positive immediate impact on labour supply estimated for age-eligible private sector workers with AFP (Hernæs et al. 2016)
- **But**
  - Only about 40% of new pensioners so far substantially impacted by the reform (OECD, 2013b)
  - To quantify reform effects on labour supply over time, a computable overlapping generations (OLG) model needed
    - Only modest impact on labour supply due to benefit-tax linkage reform (Auerbach & Kotlikoff, 1987) or longevity adjustments (Lassila & Valkonnen, 2008)
    - OLG model with endogenous retirement used by Kudrna &Woodland (2013) and Kudrna (2016)

2. Adequacy and equity – Adequacy

Gross replacement rate of NIS old-age pension (as % of average wage)

	1949 birth cohort			1980 birth cohort		
	AW67	AW100	AW150	AW67	AW100	AW150
Before reform	56.8	52	43.5	56.2	51.2	38.8
After reform	55.1	50.5	42.3	48.7	44.2	34.4
Difference (%)	-3.0	-2.9	-2.8	-13.3	-13.7	-11.3

Source: Christensen et al. (2012).

Note: AW=average wage; A retirement age of 67 assumed.

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2. Adequacy and equity – Adequacy (con't)

Gross and net replacement rates (as % of average wage)

Former wage	1949 birth cohort				1980 birth cohort			
	62	65	67	70	62	65	67	70
Gross replacement rates for old-age pension								
AW67	[a]	48.6	55.1	66.5	37.5	43.8	48.9	57.6
AW100	36.4	44.6	50.3	60.8	31.0	38.3	44.4	55.4
AW150	30.5	37.8	42.7	50.9	23.9	30.0	35.1	43.0
Net replacement rates for old-age pension, AFP and occupational pension (DC2%)								
AW67	[a]	74.5	81	92.3	68.3	75.2	80.7	90
AW100	58.8	65.7	72.2	83.5	57.3	65.7	72.8	84.6
AW150	48.5	56.7	62.6	72.8	48.1	55.6	61.8	72.1

Source: Christensen et al. (2012).

Note: AW=average wage; Life expectancy of 84 years for 1949 cohort and 87 years for 1980 cohort assumed; [a] Condition for pension access not satisfied in this case.

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Gross and net replacement rates (as % of average wage)

Former wage	1949 birth cohort				1980 birth cohort			
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2. Adequacy and equity – Intra-generational equity

Gross and net replacement rates (as % of average wage)

Former wage	1949 birth cohort				1980 birth cohort			
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Source: Christensen et al. (2012).

Note: AW=average wage; Life expectancy of 84 years for 1949 cohort and 87 years for 1980 cohort assumed; [a] Condition for pension access not satisfied in this case.

2. Adequacy and equity – Gender equity

- The reform expected to have positive impact on **old-age pension payments for women** due to:
  - Removal of minimum ceiling of 1G for earning pension rights combined with relaxed income test of minimum guarantee pension
  - Uniform longevity adjustments of pension payments
  - Pension rights accumulated through other than labour income type of entitlements, including entitlements for unpaid home care
- Halvorsen and Pedersen (2016), examining impact of the reform on **gender gap in public pensions**, find that
  - projected gender gap in average old-age pension benefits for the 1963 cohort declines from 43 to 7% when all redistributive elements in place;
  - most significant factor to be unisex annuity conversion factor, followed by changes in ceilings for pension entitlements and unpaid care entitlements.

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2. Adequacy and equity – Inter-generational equity

Gross and net replacement rates (as % of average wage)

Former wage	1949 birth cohort				1980 birth cohort			
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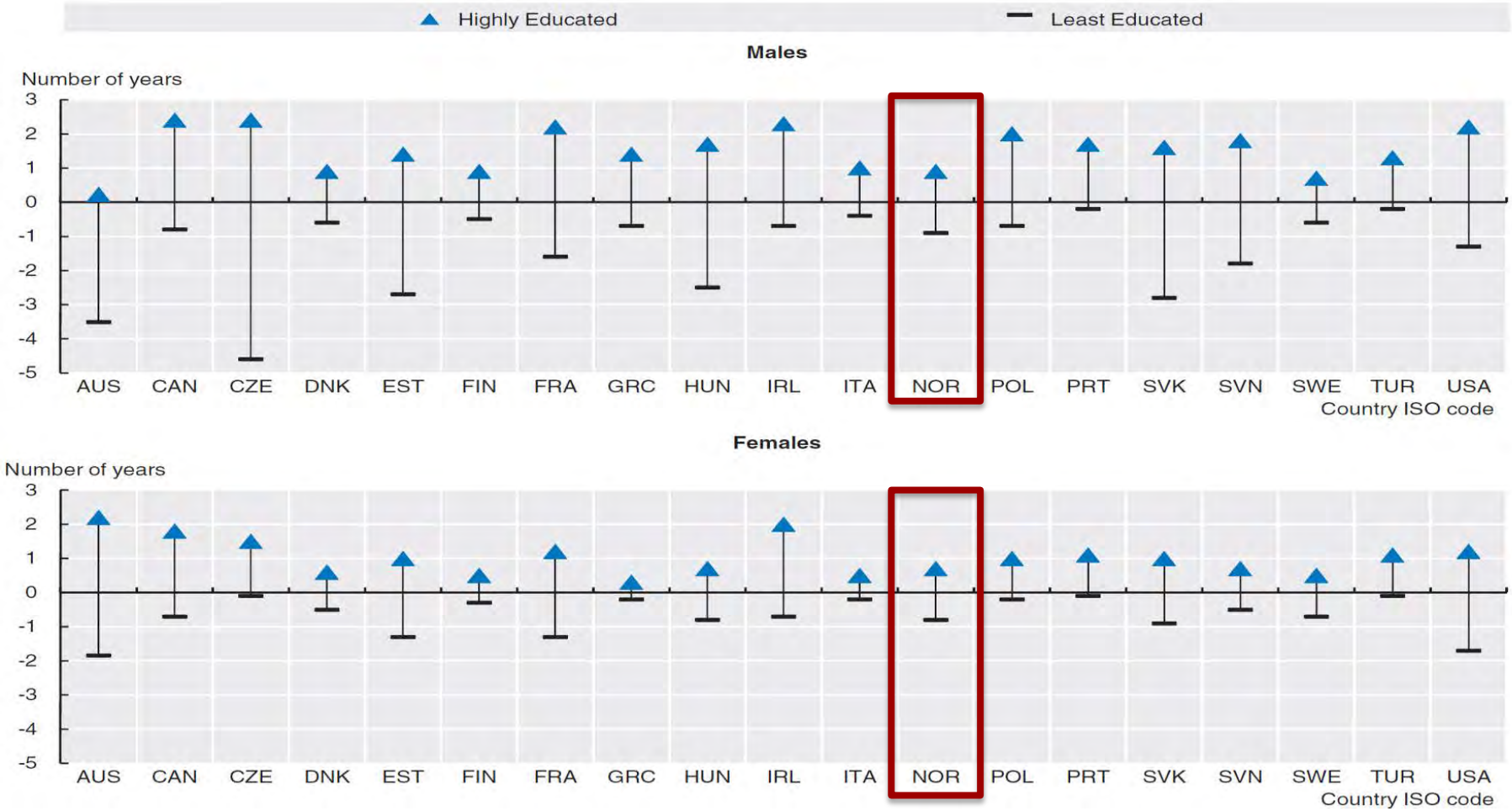
2. Adequacy and equity – Assessment & comments

- New system shown to continue to deliver adequate and equitable pensions as a result of
  - maintaining redistributive measures of public old-age pension, and
  - growing importance of occupational pensions for young & future cohorts
- **But**
  - Distributional effect of uniform annuity factors on groups of people with shorter life expectancy to be potentially important issue
  - Note that with observed mortality differentials by socioeconomic characteristics (OECD, 2016), actuarially fair pension system for the whole population will be actuarially unfair for groups with systematically shorter life expectancy (Ayuso et al., 2016)

2. Adequacy and equity – Assessment & comments

Differences in life expectancy at 65, by level of education, relative to population average (OECD, 2016)



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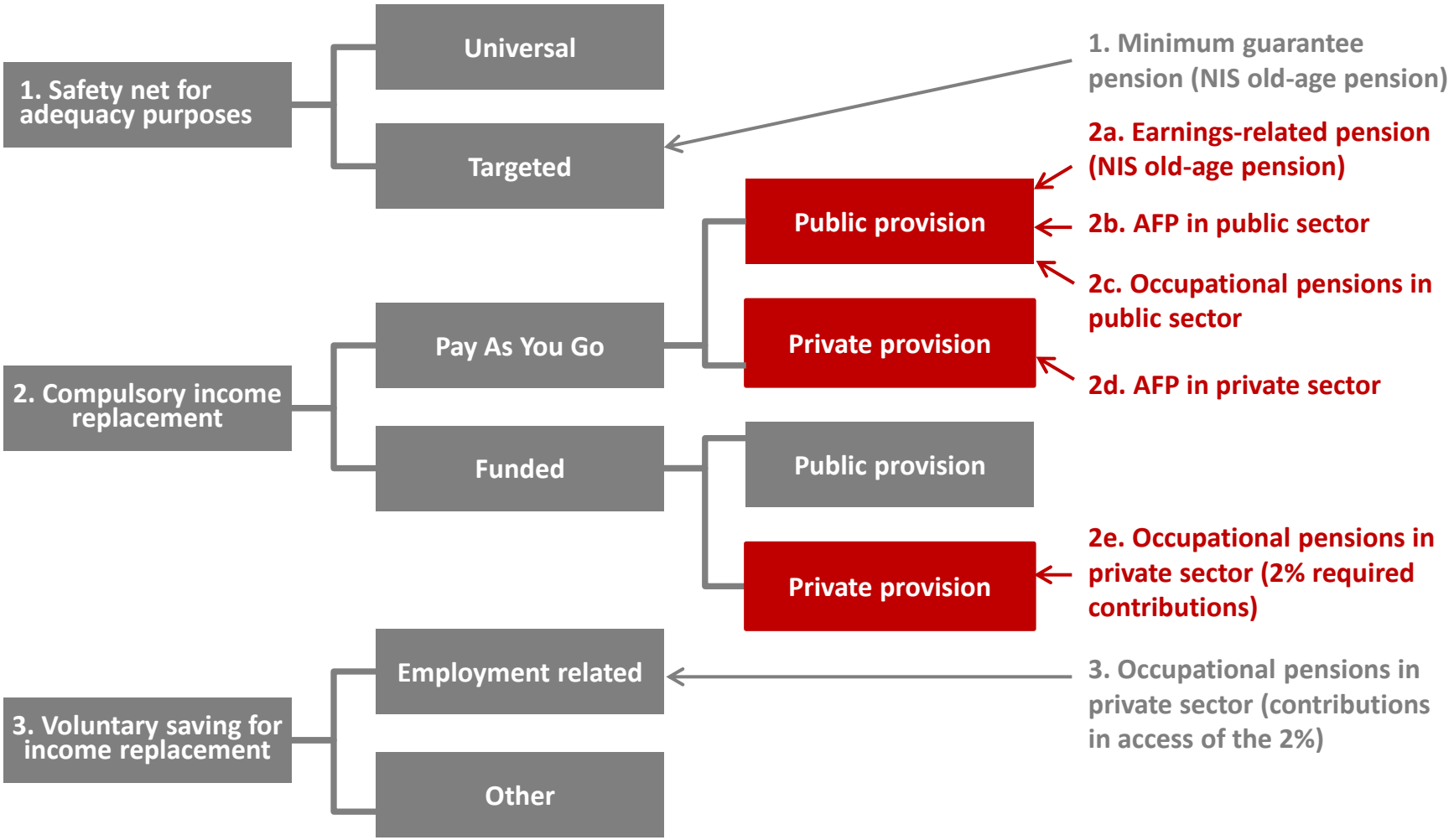
3. Conclusions – Summary of reform effects

- Norway's well-considered reform process resulted in structural pension reform that is expected to
  - have significantly positive impact on long-run fiscal sustainability (and thus affordability to taxpayers) and total labour supply (and thus the overall economy);
  - deliver adequate and equitable retirement income, with
    - redistribution from high to low income to be maintained – due to redistributive elements of public old-age pension scheme;
    - gender equity to be improved (gender gap to be reduced and almost eliminated) – mostly due to unisex annuity conversion factor;
    - adequacy of retirement income for young and future generations (inter-generational equity) to be improved – due to changes to occupational pensions.

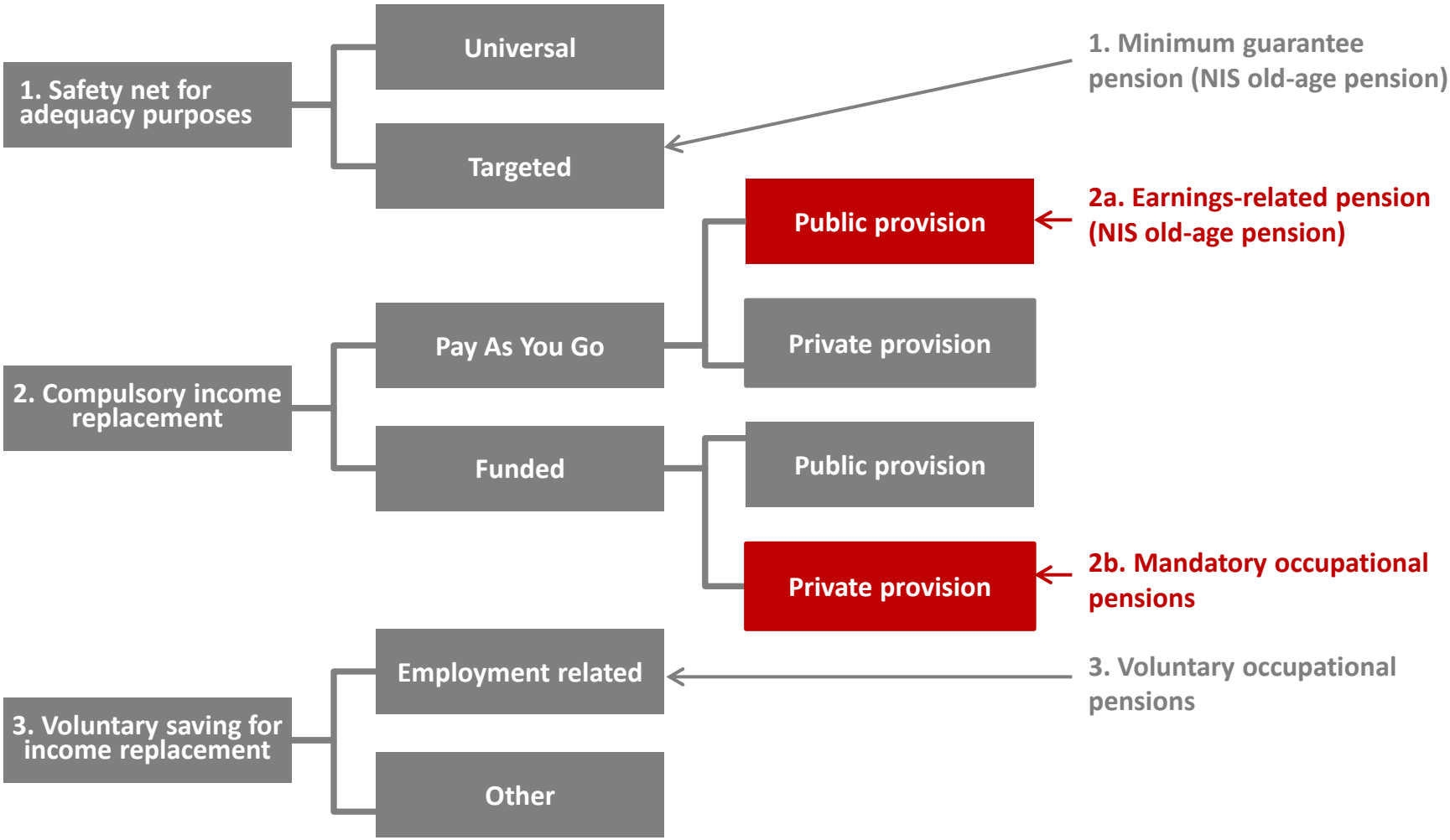
3. Remaining issues

1. Complexity of the system, largely due to different second-pillar pension schemes for employees in private and public sectors
   - Only limited impact of reform, mainly on private sector workers
2. Funding uncertainty
   - No agreement on funding of increasing future public pension costs
   - Future macroeconomic and demographic risks born entirely by government
3. Longevity risk also partly born by government
   - Annuity conversion factors for ages 62-75 calculated only once for each cohort at age 61 – implying increased government costs on pensions due to unexpected increase in life expectancy for given cohort
4. Distributional impact of longevity adjustments on groups of individuals with shorter life expectancy

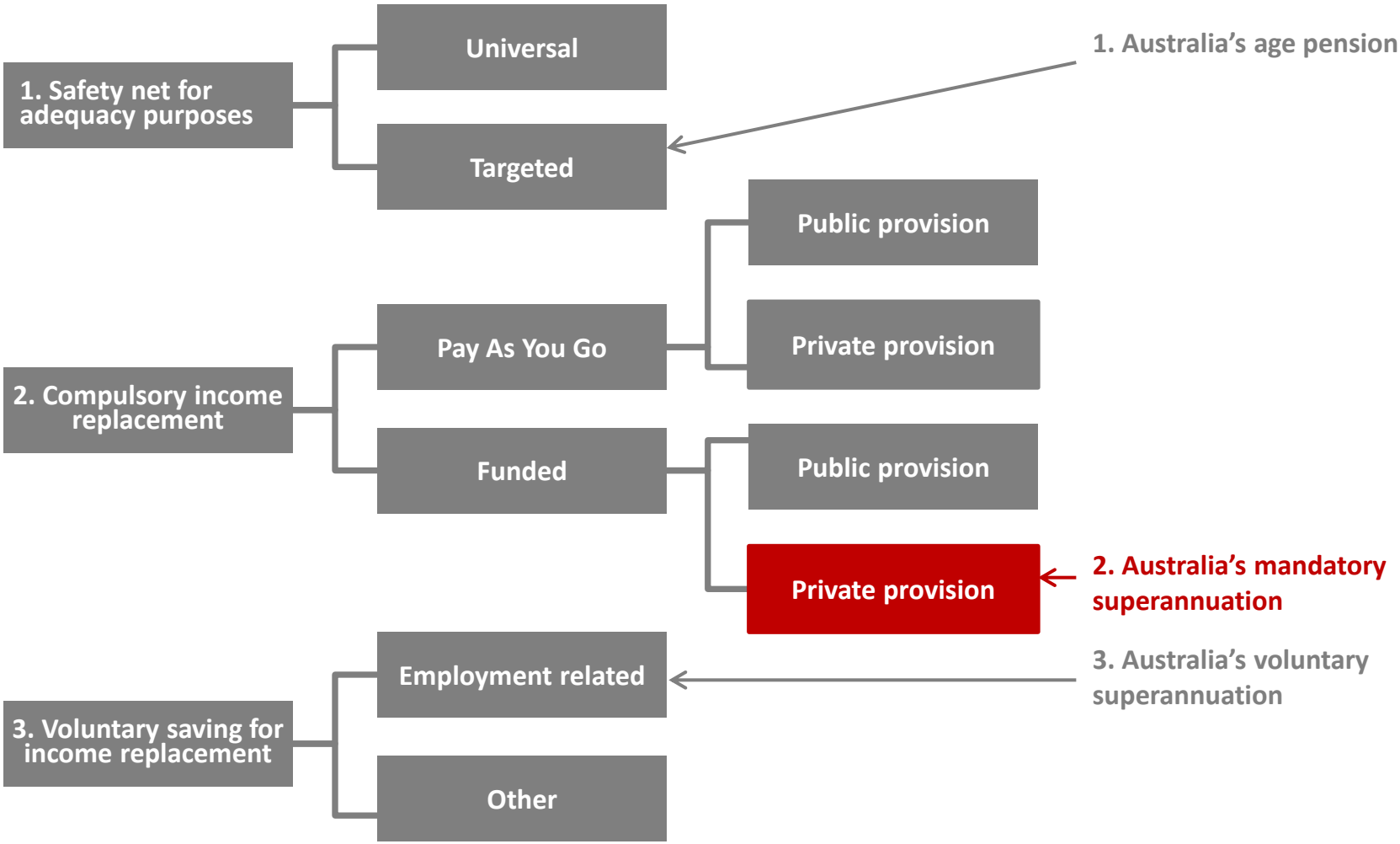
3. Policy recommendation 1 (current system)



3. Policy recommendation 1 (ideal system)



3. Policy recommendation 1 (Australian system)



3. Conclusions – Policy recommendation 1

- First step to merge private sector AFP with occupational pensions
  - Annual contributions of 3.5-4% of wage (to achieve a typical AFP benefit (Hippe and Voien, 2014)) should be paid for new workers directly into their occupational pension accounts.
- Unreformed second-pillar pension schemes for public sector workers
  - Alignment of these schemes with new main principles of public old-age pension system recommended by OECD (2013b)
  - High take-up of new old-age pension (combined with work) by public sector workers indicating growing political support for such reform
  - Unfunded public sector pension liabilities common internationally, but some countries already closed these schemes for new employees (e.g., Australia)

3. Conclusions – Policy recommendations 2-4

2. Funding uncertainty

- Automatic adjustment mechanism to be considered to account for unfavourable macroeconomic and demographic developments
- Important feature of pension systems in several developed countries (e.g., Sweden, Germany and the Netherlands)

3. Longevity risk

- Annuity conversion factors to be recalculated (using updated life expectancy) at age 67 for those claiming old-age pension before age 67

4. Distributional issue of longevity adjustments

- Progressive taxation or means testing of public pensions to be an option
- Alternative to calculate different annuity rates for different socioeconomic groups (e.g., by lifetime income), but more research on life expectancy by this or other socioeconomic indicators needed

Thank you for your attention

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Questions?

My research available at this website