Considerations in Mapping the Adequacy and Sustainability of Care and Support for the Elderly in Developed Countries

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Agenda

1. Introduction
2. Methodology
3. Defining adequacy
4. Defining sustainability: current vs. potential
5. Findings
6. Discussion and recommendations
7. How would you rate Ireland?
8. Future research
9. Your comments

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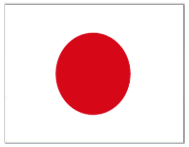
Programs

- Social security (retirement)
- Health care
- Long term care

Countries

- **North America**: Canada  USA 
- **Europe**: England  France  Germany 

  Netherlands  Sweden 
- **Asia**: Japan  South Korea 
- **Australia** 

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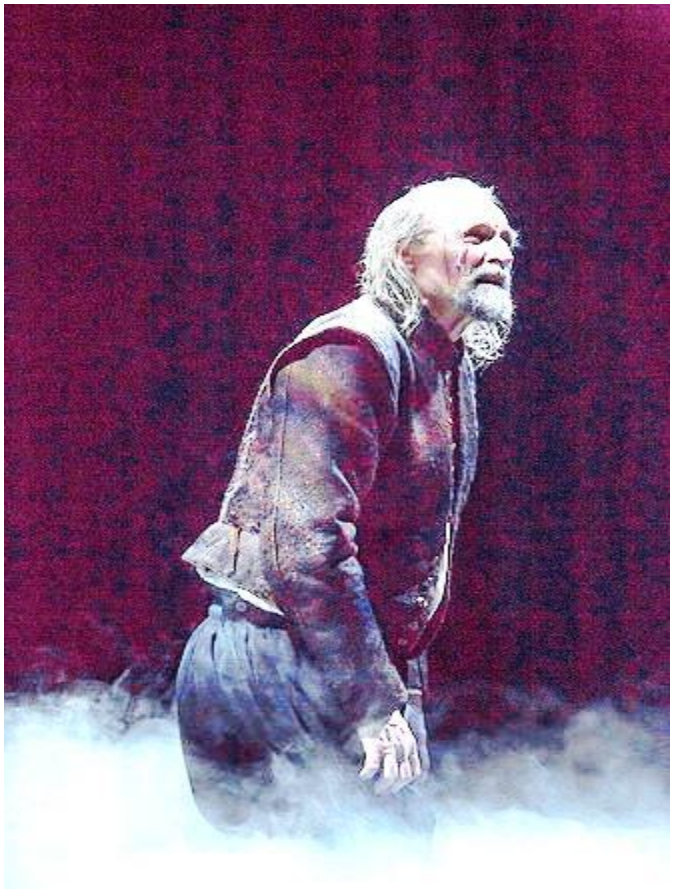
Why use fuzzy sets?

- **Adequacy and sustainability sound like absolutes**
- **But there are many variables and much graduation**
- **Unlikely that a program will be completely out of the set or completely in the set for every situation**

“Our basest beggars are in the poorest thing superfluous”



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Approach: Adequacy Assessment

- **Define specific family compositions**
- **Calculate income from state pension**
- **Compare to general expenses and specific expenses for drugs and LTC**
- **Determine score**
- **Compute index score across all family compositions**

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Family Composition One

- Couple both aged between 65 and 70
- Male retired on state pension
- Had career earnings at average national wage
- No other earnings or savings
- Annual drug expenses of $2,000 (before state plan)
- General living expenses: 53% of average national wage

Family Composition Two

- Single female age 85 or older
- Receiving state survivor pension
- Based on male who had career earnings at average national wage
- No other earnings or savings
- Annual drug expenses of $1,200 (before state plan)
- General living expenses: 38% of average national wage

Four Family Situations Considered

Family Composition → Care Status ↓	One - Couple	Two – Surviving Female age 85+
No institutional care required	rent not own CN	rent not own SN
One member requires institutional care	rent not own CY	Institutionalized SY

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State Pension Compared to General Living & Total Expenses for Each of CN, CY, SN, SY

Label (Social protection)	Comparison	Score
Completely out of set	sp < 50% gle	0
Somewhat inadequate	50% gle ≤ sp < 100% gle	0.33
Somewhat adequate	100% gle ≤ sp < 100% te	0.67
Completely adequate	100% te ≤ sp	1

- sp state pension
- gle general living expenses excluding care and drug expenses
- te total expenses

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Average Score By Country and Label

Score	At Least One Raw Score of 1	Label
0	No	Completely inadequate
0.2 > score > 0	No	Mainly inadequate
0.4 > score ≥ 0.2	No	Often inadequate
0.4 > score ≥ 0.2	Yes	More inadequate than not
0.6 > score ≥ 0.4	No or Yes	Not adequate or inadequate
0.8 > score ≥ 0.6	No	More adequate than not
0.8 > score ≥ 0.6	Yes	Often adequate
1 > score ≥ 0.8	Yes or No	Mainly adequate
1	Yes	Completely adequate

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Adequacy: Results & Assessment- Anglo Saxon

ID				
CN	0.33	0.33	0.33	0.33
CY	1	0.67	0	0
SN	0.33	0.33	0.33	0.33
SY	1	1	0	0.33
Index	0.67	0.58	0.17	0.25
Label	Often Adequate	Not Adequate or Inadequate	Mainly Inadequate	Often Inadequate

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Adequacy: Results & Assessment- Europe

ID				
CN	0.33	0.33	1	1
CY	0.33	1	1	1
SN	0.33	0.33	1	1
SY	0.33	1	1	1
Index	0.33	0.67	1	1
Label	Often Inadequate	Often Adequate	Completely Adequate	Completely Adequate

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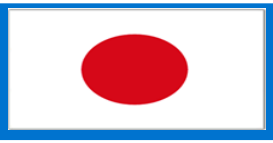
Adequacy: Results & Assessment- Asia

ID		
CN	0.33	0.33
CY	1	1
SN	0.33	0.33
SY	1	1
Index	0.67	0.67
Label	Often Adequate	Often Adequate

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Adequacy Comments

- Divide between English-speaking countries (except Australia) and many European countries reflects differences in philosophy underlying system design
- ➢ Expectation that the individual will save for retirement
- ➢ Tendency to think of LTC as an individual or family responsibility but provide for the needy – both Australia and Canada have provided LTC support

Adequacy Policy Recommendation 1

- **Consider introducing a demogrant**
- **It can fill gaps left by earnings-related state pensions**
- **Both Canada and Sweden use this approach**

Adequacy Policy Recommendation 2

- **Some form of comprehensive universal LTC insurance needs to be in place**
- **LTC is an insurance risk**
- **Different ways can be used to provide insurance coverage**
- **Australia, Canada – government subsidies with co-payments and means testing**
- **Germany, Japan, South Korea – mandatory insurance**

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Adequacy Policy Recommendation 3

- **State survivor pensions need to be improved**
- **Based on the change in general living expenses a state survivor pension of 70% of the primary pension would be more adequate**

Sustainability Labels

Score	Label
0 – 0.20	Unsustainable
0.21 – 0.40	Likely unsustainable
0.41 – 0.60	Possibly sustainable
0.61 – 0.80	Likely sustainable
0.81 or higher	Sustainable

Current Sustainability

1. **Stability of current funding rates for social security – a measure of the sustainability of social security in its current form**
2. **Level of spending on health care as a percentage of GDP – an indicator of revenues already committed**
3. **Ratio of "grandmothers to granddaughters" – a determinate of a family's ability to provide care and support to its elderly family members**

- **Calculate an average score and determine assessment**

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Current Sustainability Components 1 & 2

Score	Stability of SS Funding Over Long term	HC Spending GDP %
1	Yes	Less than 10.0
0.5	Possibly	10.0 – 14.9
0	No	15.0 or higher

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Current Sustainability Component 3

Absolute Ratio 2010 (r)

≤ 0.35	1
0.35 < r ≤ 0.7	0.8
0.7 < r ≤ 1.05	0.6
1.05 < r ≤ 1.4	0.4
1.4 < r ≤ 1.75	0.2
> 1.75	0

Ratio Change (2010/1950)

≤ 1.75	1
1.75 < r ≤ 2.5	0.87
2.5 < r ≤ 3.25	0.75
3.25 < r ≤ 4	0.62
4 < r ≤ 4.75	0.5
4.75 < r ≤ 5.5	0.37
5.5 < r ≤ 6.25	0.25
6.25 < r ≤ 7	0.12
> 7	0

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Assessment of Current Sustainability – Original 6

Item						
SS Stability	1.0	0.5	0	0.5	1.0	0
HC Spending	0.5	0.5	0.5	0.5	0.5	0
GM:GD	0.78	0.8	0.8	0.58	0.74	0.84
Index	0.76	0.6	0.43	0.53	0.75	0.28
Label	Likely Sustain-able	Possibly Sustain-able	Possibly Sustain-able	Possibly Sustain-able	Likely Sustain-able	Likely Unsust-ainable

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Assessment of Current Sustainability - Extended

Item				
SS Stability	0.5	0.5	0	0
HC Spending	1	1	1	1
GM:GD	0.84	0.1	0.46	0.68
Index	0.78	0.53	0.49	0.56
Label	Likely Sustainable	Possibly Sustainable	Possibly Sustainable	Possibly Sustainable

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Potential Sustainability

1. Consider Old Age Support Ratio in 2008 and 2050 – an indication of demographic pressures on the tax base
2. Consider total tax revenue as % of GDP – a measure of ability to pay
3. Consider expenditure on public pensions in 2010, 2030, 2050 – an indicator of the extent to which public spending is already committed

- Calculate an average score and determine assessment

Level of OASR Assessment Scale

OASR (2008, 2050)	Score
4.0 or higher	1
3.0 – 3.9	0.75
2.0 – 2.9	0.5
1.5 – 1.9	0.25
Less than 1.5	0

Tax Level Assessment Scale

Total Tax Revenue as % of GDP	Score
Less than 30.0	1
30.0 – 34.9	0.8
35.0 – 39.9	0.6
40.0 – 44.9	0.4
45.0 – 49.9	0.2
50 or higher	0

Public Pension Expenditure 2010, 2030, 2050

% of GDP	Score
Under 5	1
5.0 – 8.5	0.75
8.6 – 11.5	0.5
11.6 – 14.9	0.25
15 or higher	0

Assessment of Potential Sustainability – Original 6

Item						
OASR	0.61	0.75	0.56	0.56	0.75	0.64
Tax Burden	0.8	0.6	0.4	0.6	0.2	1
PP Spend	0.75	0.75	0.25	0.42	0.5	1
Index	0.72	0.7	0.4	0.52	0.48	0.88
Label	Likely Sustainable	Likely Sustainable	Likely Unsustainable	Possibly Sustainable	Possibly Sustainable	Sustainable

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Assessment of Potential Sustainability - Extended

Item				
OASR	0.72	0.28	0.33	0.72
Tax Burden	1	1	1	0.6
PP Spend	1	0.5	0.92	0.58
Index	0.91	0.59	0.75	0.64
Label	Sustainable	Possibly Sustainable	Likely Sustainable	Likely Sustainable

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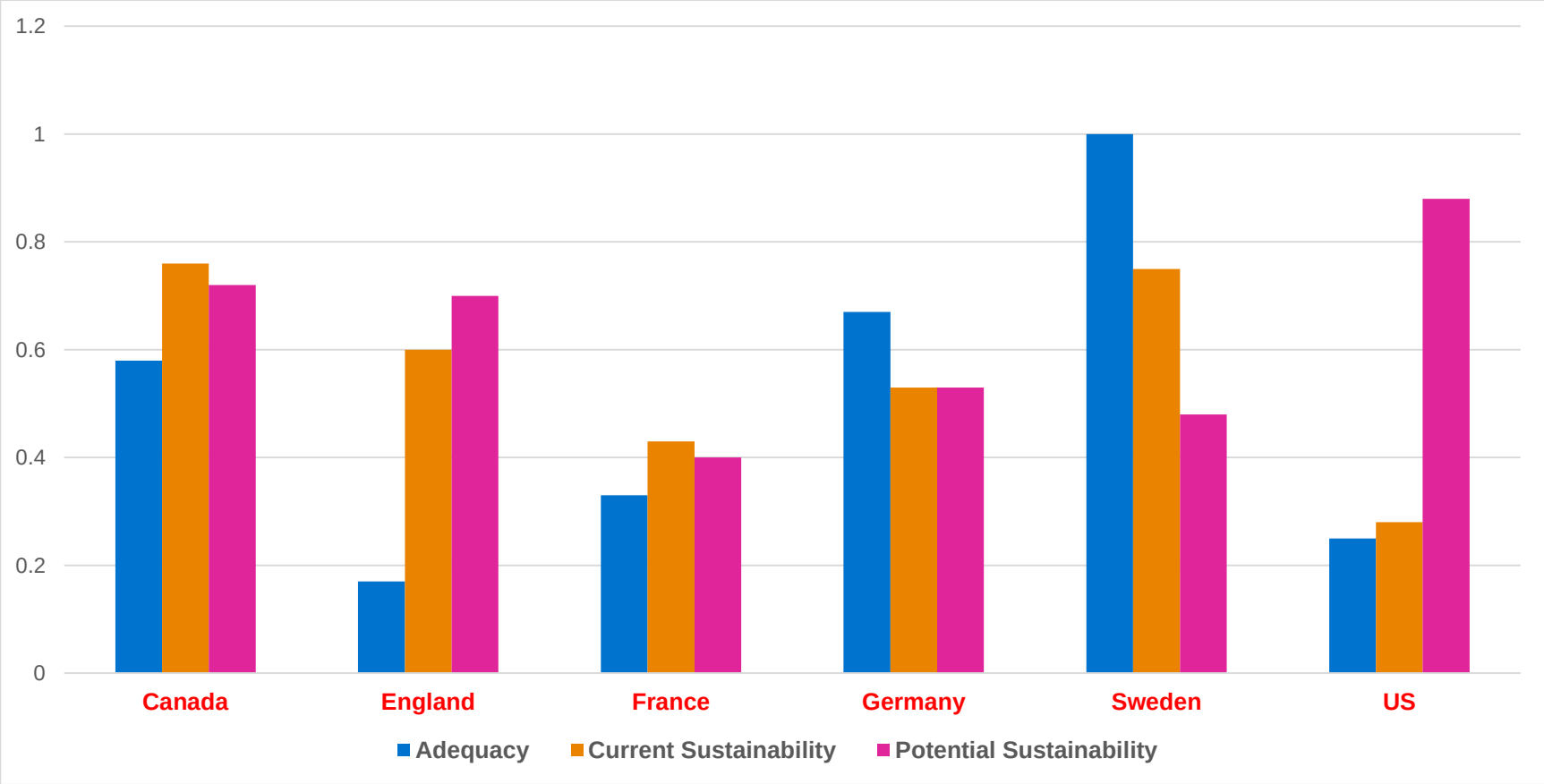
Adequacy & Sustainability Original Six



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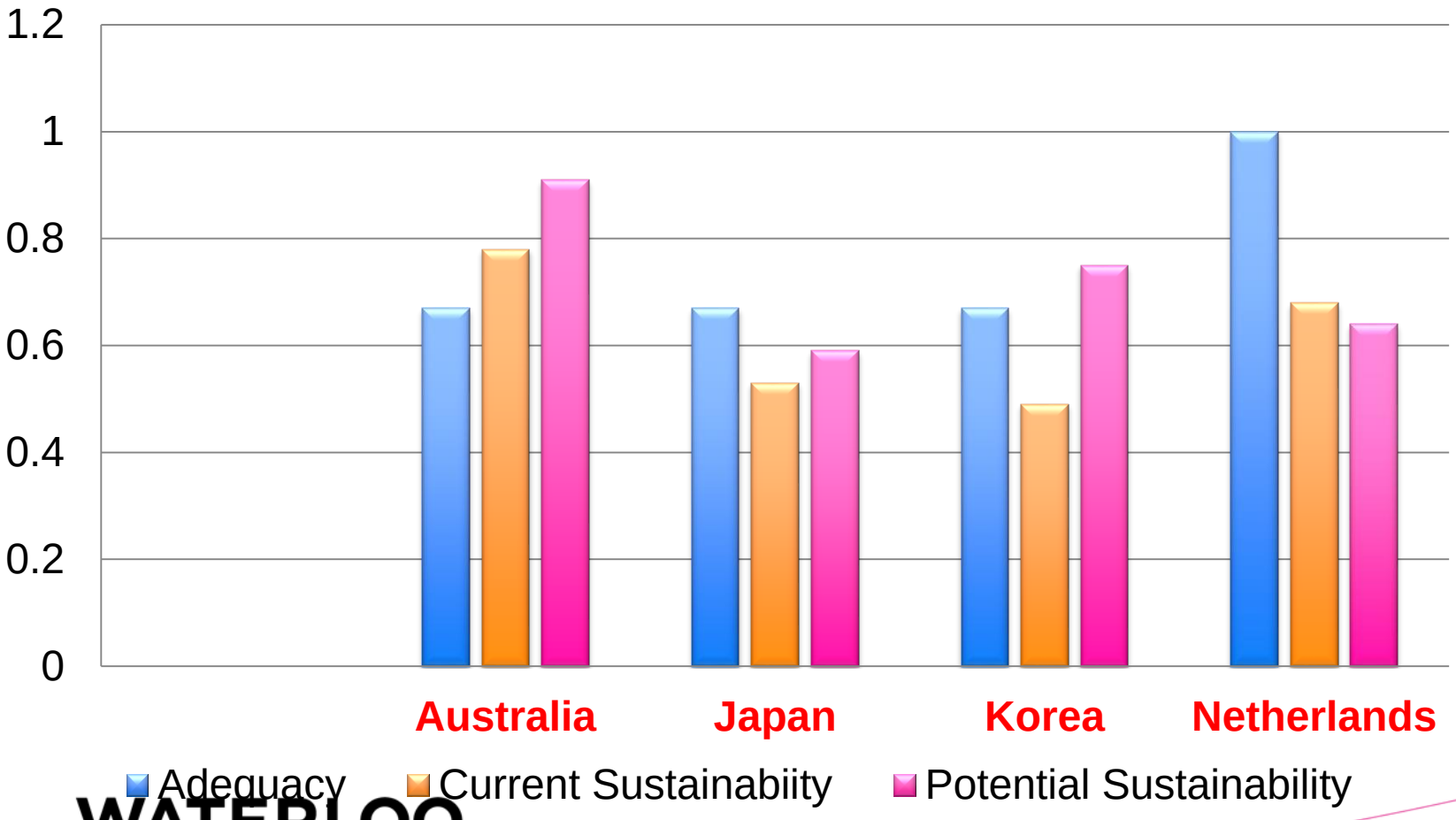
Adequacy & Sustainability Extended



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Overall Assessment

Top 3	Bottom 3
Netherlands	England
Sweden	France
Australia	USA

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Comments - Netherlands

- **Adequacy – Completely Adequate**

1. **High pension income**
2. **Strong LTC system**

- **Current Sustainability – Possibly Sustainable**

1. **Pension funding needs stabilizing**
2. **Well controlled HC spending**

- **Potential Sustainability – Likely Sustainable**

1. **Aging not severe**
2. **Moderate tax burden**

Comments - Sweden

- ❖ **Adequacy – Completely adequate**

1. **State pension provides adequate income**
2. **LTC – mainly state provided**

- ❖ **Current sustainability – Likely Sustainable**

1. **NDC pension provides stable funding**

- ❖ **Potential sustainability – Possibly sustainable**

1. **Aging not severe**
2. **Tax burden & public pension commitment leave little room to adjust but tax rates are reducing**

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Comments - Australia

- **Adequacy – Often Adequate**

1. **Significant state pension**
2. **Strong LTC system**

- **Current Sustainability – Likely Sustainable**

1. **Questions regarding pension funding stability**
2. **Well controlled HC spending**

- **Potential Sustainability – Sustainable**

1. **Aging not severe**
2. **Lots of fiscal room**

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Comments - England

- **Adequacy – Often inadequate**

1. Relatively low state pension
2. LTC costs an additional burden

- **Current sustainability – Possibly Sustainable**

1. Questions regarding stability of social security financing rate

- **Potential sustainability – Likely sustainable**

1. Aging not severe
2. Tax burden & public pension commitment provide room to adjust

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Comments - France

- **Adequacy – Often Inadequate**

1. Complex system – final pension requires long service, uses a long averaging period, and price-valorization
2. High deductible for LTC

- **Current – Possibly Sustainable and Potential – Likely Unsustainable**

1. Social security rate won't support full benefits over actuarial horizon
2. Relatively rapidly aging population
3. Little fiscal headroom (tax burden, public pensions)

- Little room to reduce adequacy of benefits; working longer is a solution, but is there the public will to do so?

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Comments - USA

- Adequacy – Often Inadequate

1. Modest SS benefits
2. Considerable HC and LTC costs borne by individuals

- Current – Likely Unsustainable

1. SS rate won't support full benefits over actuarial horizon
2. Health care expenditures exceed 15% of GDP

- Potential – Sustainable

1. Aging not as severe as many developed countries
2. Comparatively low total tax revenue as a % of GDP
3. Low commitment to public pension expenditure

- Potential to raise taxes but is it feasible politically?

How Would You Rate Ireland? Adequacy

- State pension for contributor combined with dependent pension more than adequate
- Combined with means tested nursing care provision still more than adequate for couple or institutionalized surviving dependent
- Income to surviving dependent who is not institutionalized is slightly less than general expenses
- Overall assessment **Mainly Adequate**

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How Would You Rate Ireland? Current Sustainability

- PayGo pension system will require contribution increases as population ages
- Health care costs less than OECD average and less than 9% of GDP
- Grandmothers to granddaughters ratio the most favourable of any country studied so far
- Overall assessment **Likely Sustainable**

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How Would You Rate Ireland? Potential Sustainability

- 2008 OASR very strong but rapid change projected by 2050
- Tax burden comparatively light
- Public pension expenditure commitment moderate but growing by 2050
- Overall Assessment **Likely Sustainable**

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Areas for Future Research

1. Constructing indices and fuzzy sets differently
2. Considering social attitudes
3. Including private savings, employer-provided benefits, and family support
4. Having a model that would permit testing of various assumptions and changes