

Measuring the Adaptation of Countries to Societal Aging

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John A. Hartford Foundation Aging Society Index

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and the Research Network on an Aging Society

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Rationale

- Society-level characteristics can have major positive or negative effects on the health and well-being of older persons.
- These effects are mediated through limitation or enhancement of access to effective health care, through providing supports that enhance function and restrict dependency, by assuring financial security and opportunities for older persons to effectively engage in society.
- U.S policymakers continue their preoccupation with the future solvency of Medicare and Social Security to the neglect of broader issues.
- We must move beyond the archaic old-age dependency ratio and metrics, such as GDP, which neglect many of the critical factors that influence societal function.

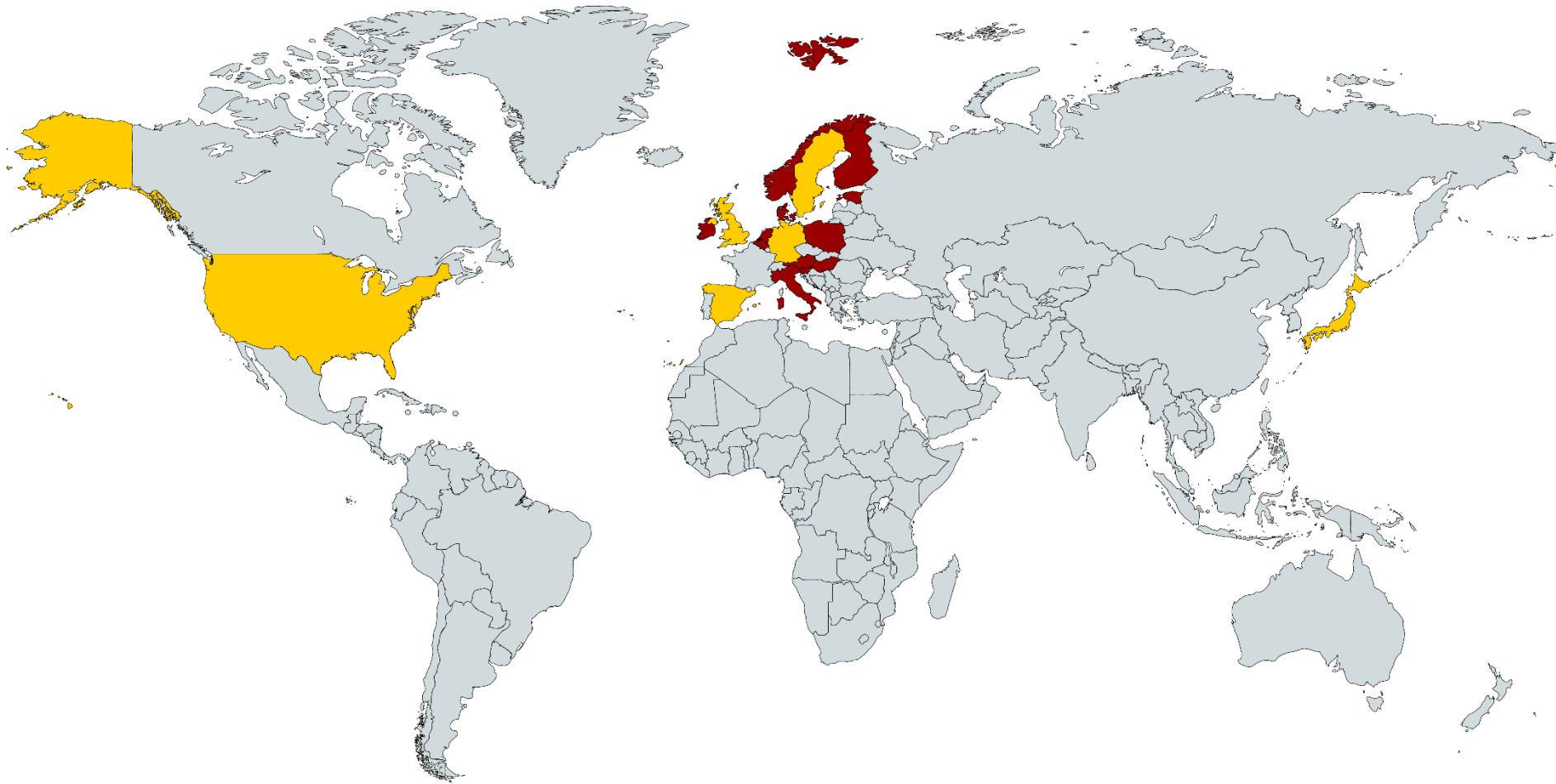
To be useful an Index of Societal Aging must:

- Include reliable and sensitive indicators that permit accurate assessment of both current conditions and likely future trajectory of society.
- Serve both as a guide to the implementation of policies and a tool by which we can assess their effectiveness over time and across countries.

There are five domains in the Hartford Aging Index

1. **Productivity and Engagement:** measures connectedness within and outside the workforce
2. **Well-being:** measures the state of being healthy
3. **Equity:** measures gaps in well-being and economic security between the haves and have nots
4. **Cohesion:** measures tension across generations and social connectedness
5. **Security:** measures support for retirement and physical safety

OECD Countries in Hartford Aging Index (n=18)



Expanded to 18 countries

1. Germany
2. Japan
3. Spain
4. Sweden
5. United Kingdom
6. United States
7. Austria
8. Belgium
9. Denmark
10. Estonia
11. Finland
12. Hungary
13. Ireland
14. Italy
15. Netherlands
16. Norway
17. Poland
18. Slovenia



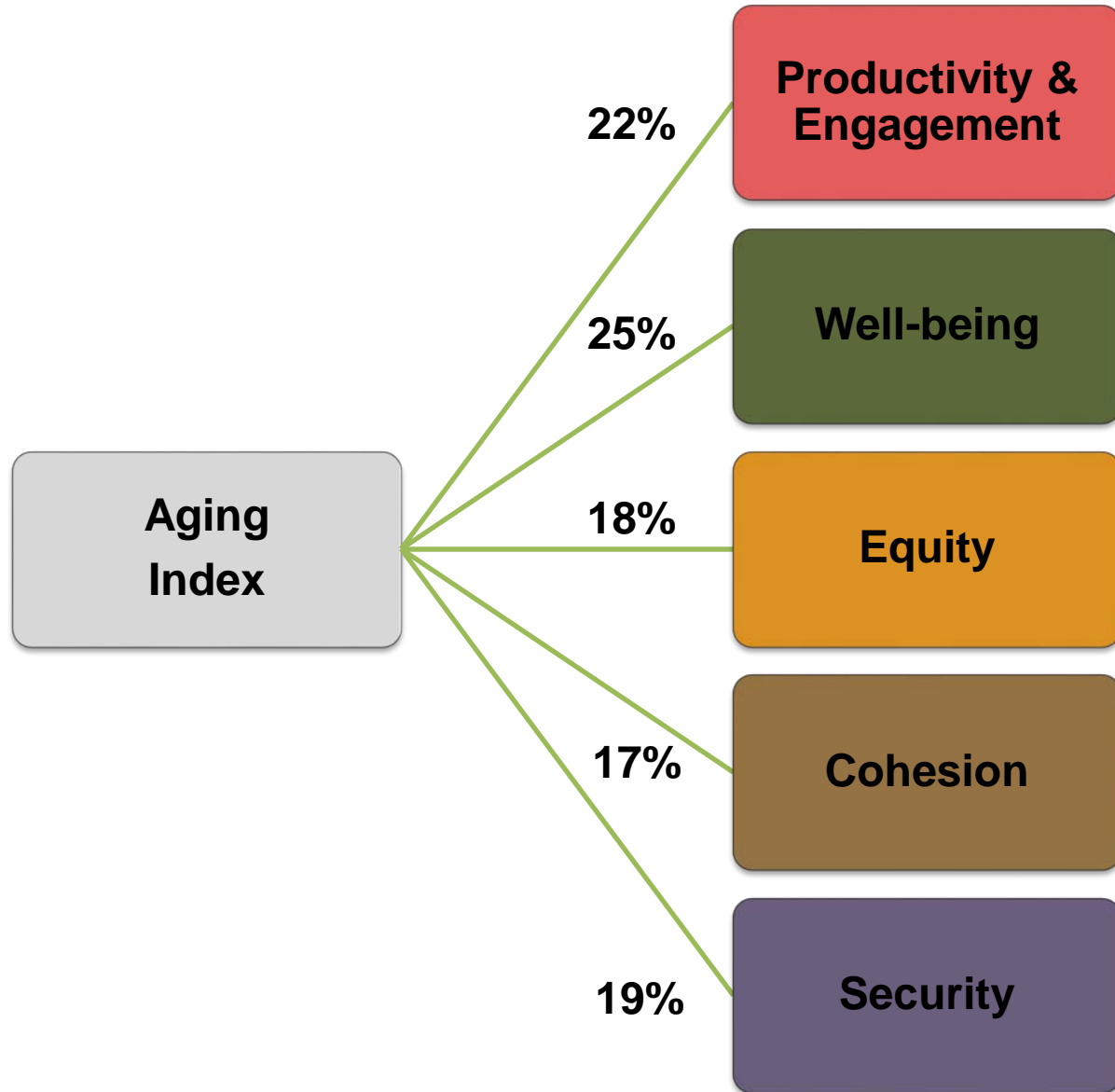
Methods

Weighting Strategy

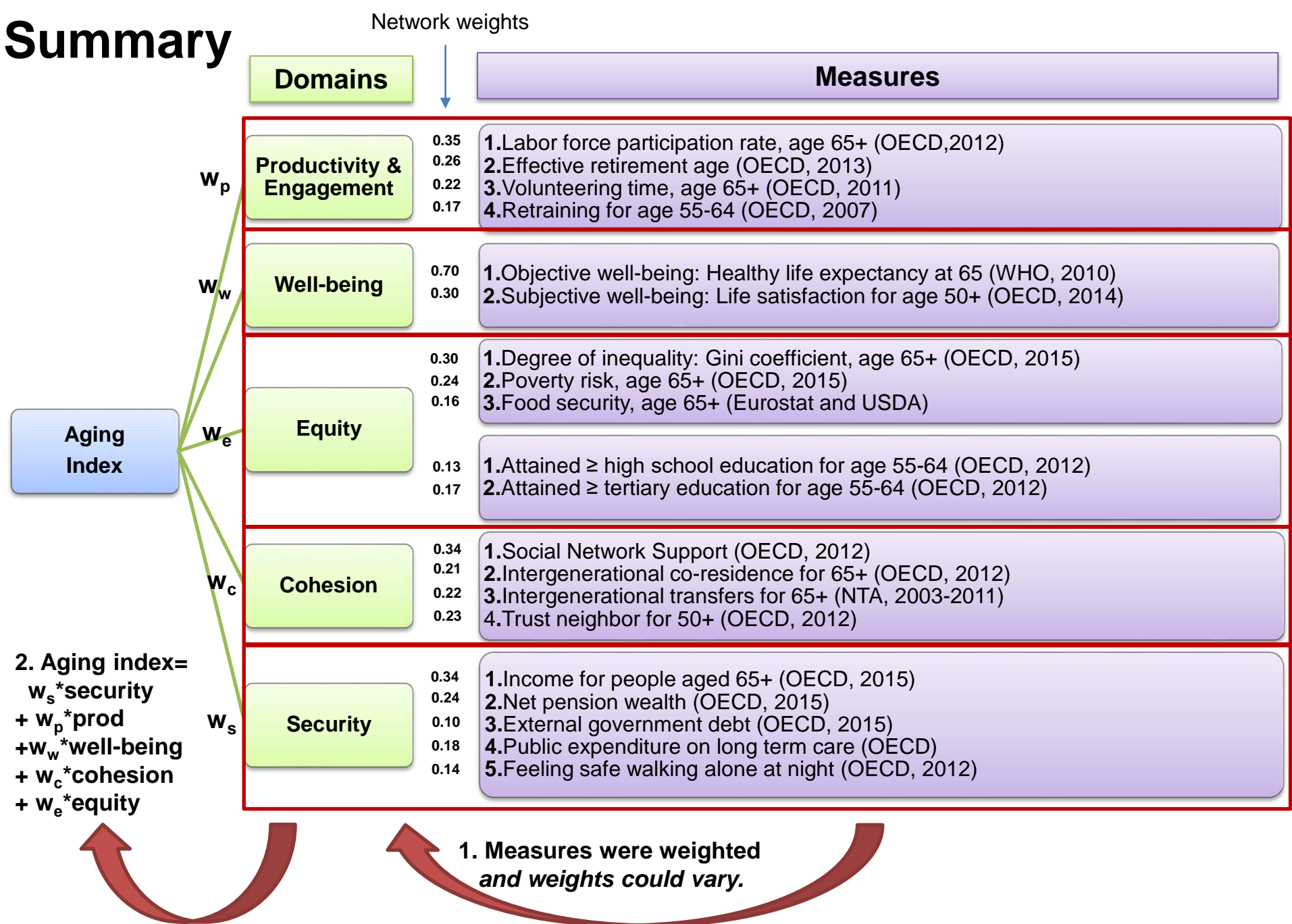
- The Aging Society Network, an interdisciplinary group of a dozen scholars with deep expertise in aging was used as a source of weights.
 - Weighting was done for individual measures within the five domains
 - Weighting was done across five domains: productivity and engagement, well-being, equity, cohesion and security

Summary

Domains



Summary



DOMAIN: PRODUCTIVITY & ENGAGEMENT

Measures connections within and outside the workforce

Measures	Network weights
Labor force participation rate for people aged 65+ The proportion of population age 65+ in the labor force, OECD	35
Effective retirement age The effective age at which older workers withdraw from the labor force, OECD	26
Time spent volunteering for people aged 65+ Average minutes of volunteering per day, OECD	22
Retraining: Non-formal education for people aged 55 to 64 Proportion of the population aged 55-64 that participated in non-formal education, OECD	17

Productivity
Engagement

Well-
being

Equity

Cohesion

Security

DOMAIN: WELL-BEING

Measures objective and subjective health status

Measures	Network weights
Objective well-being: Healthy life expectancy at aged 65 Average number of years that a person aged 65 is expected to live in a state of good health, OECD	70
Subjective well-being for people aged 50 and above: life satisfaction “All things considered, how satisfied would you say you are with your life these days?” (Gallup)	30

Productivity
Engagement

Well-being

Equity

Cohesion

Security

DOMAIN: EQUITY

Measures gaps in well-being and economic security between the haves and have nots

Measures	Network weights
Gini coefficient for people aged 65 and older Degree of inequality of income distribution within a country, OECD	30
Food security for people aged 65 and older Europe: the share of people living in households who cannot afford to eat a meal with meat, fish or protein equivalent every second day, Eurostat. USA: households in which one or more people were hungry at times during the year because they could not afford enough food, USDA.	16
Poverty risk for people aged 65 and older Ratio of people whose income falls below the poverty line, taken as half the median household income of the total population, OECD.	24
Attained at least high school education for people aged 55 to 64 Proportion of the population aged 55-64 that has attained high school or higher education	13
Attained at least tertiary education for people aged 55 to 64 Proportion of the population aged 55-64 that has attained tertiary or higher education.	17

Productivity
Engagement

Well-being

Equity

Cohesion

Security

DOMAIN: COHESION

Measures tension across generations and social connectedness

Measures	Network weights
Social support for people aged 65 and older People who report having relatives or friends they can count on, OECD	34
Trust neighbor for people aged 50 and older People aged 50 who responded that they trust their neighbor, World Value Survey	23
Intergenerational transfers to other age group, aged 65+ Percentage of transfers elderly provides to other age group, National Transfers Account	22
Intergenerational co-residence for people aged 65+ Percentage of elderly staying with children, Countries' Census	21

Productivity
Engagement

Well-
being

Equity

Cohesion

Security

DOMAIN: SECURITY

measures safety and support for retirement, including economic and physical factors

Measures	Network weights
Income for people aged 65+ The income of older people, comparing them with the population as a whole, OECD.	34
Net pension wealth Present value of the flow of pension benefits, taking account of the taxes and social security contributions that retirees have to pay on their pensions.	24
Public expenditure on long term care (%GDP) Long-term care public expenditure (health and social components), as share of GDP, OECD	18
Physical safety Percentage of the population declaring feeling safe when walking alone at night in the city or area where they live, OECD	14
External government debt (%GDP) Country's external government debt as share of GDP, CIA.	10

Productivity
Engagement

Well-
being

Equity

Cohesion

Security

Scoring on a measure

1. Ensure larger values implies better outcomes

- eg. 1-poverty rate

2. Standardization across measures:

- **Goalpost**: min and max values are set as goalposts to expressed different units into measures between 0 and 100%

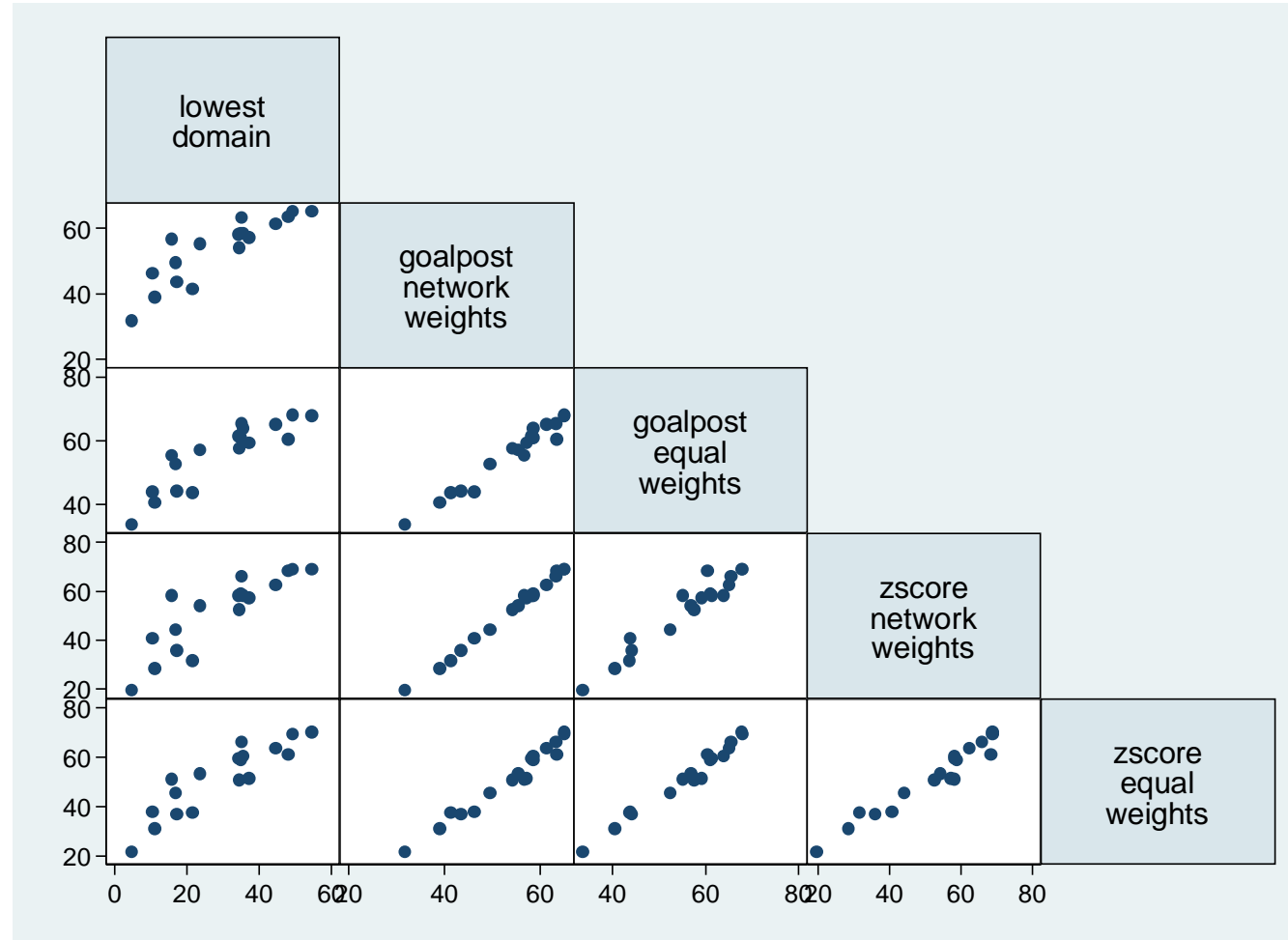
$$Goalpost = \frac{actual - min}{max - min} * 100\%$$

- **Z-score**: the number of standard deviations country's measure is from the OCED mean
- **Least domain**: minimum over the five domains, low score in any one domain cannot be offset by higher scores in all the others

Scoring on a measure con't

- 1. All individual measures are standardized with a score of zero for the worst performing country and a score of 100 for the best performing country where higher values indicate better outcomes. Thus “poverty risk in the elderly’ is expressed as “ the proportion not at risk of poverty”**
 - eg. In the measure “Income aged 65 + (%)” the lowest OECD country is Australia, where those over 65 years had income 67.1% of the total population and the highest country was Luxembourg with old age income is 100% of the total population. Thus Australia was given a score of 0 for this measure and Luxembourg a score of 100. The United States, where old age incomes were 92.1% of total population, was assigned a score of 76.0 for this measure because the US score of 92.1% is 76% of the way between the Australian and Luxembourg scores.

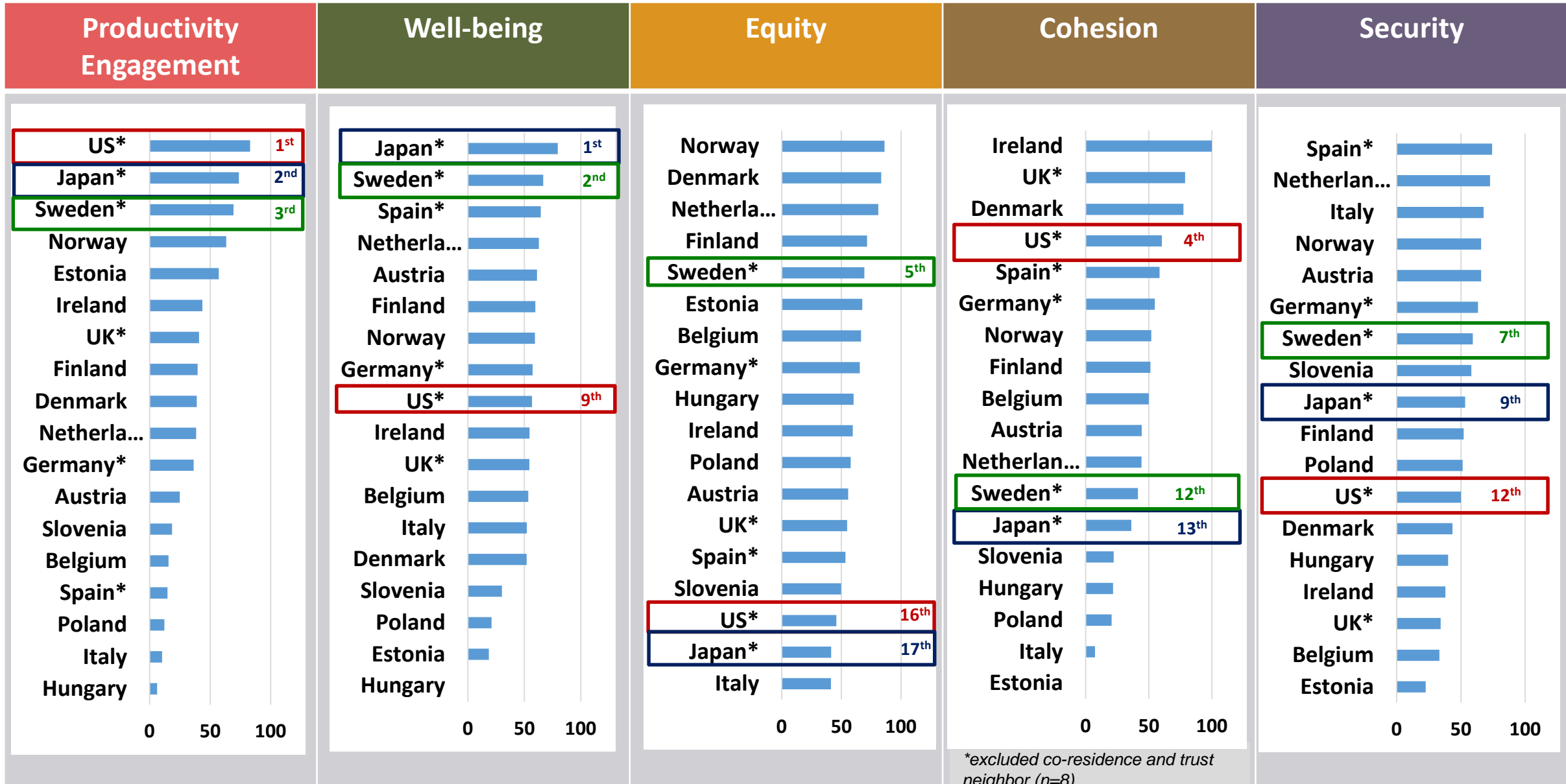
Hartford Aging Index is robust to different weighting schemes and methods (n=18)





Results

Domain scores: Hartford Aging Index



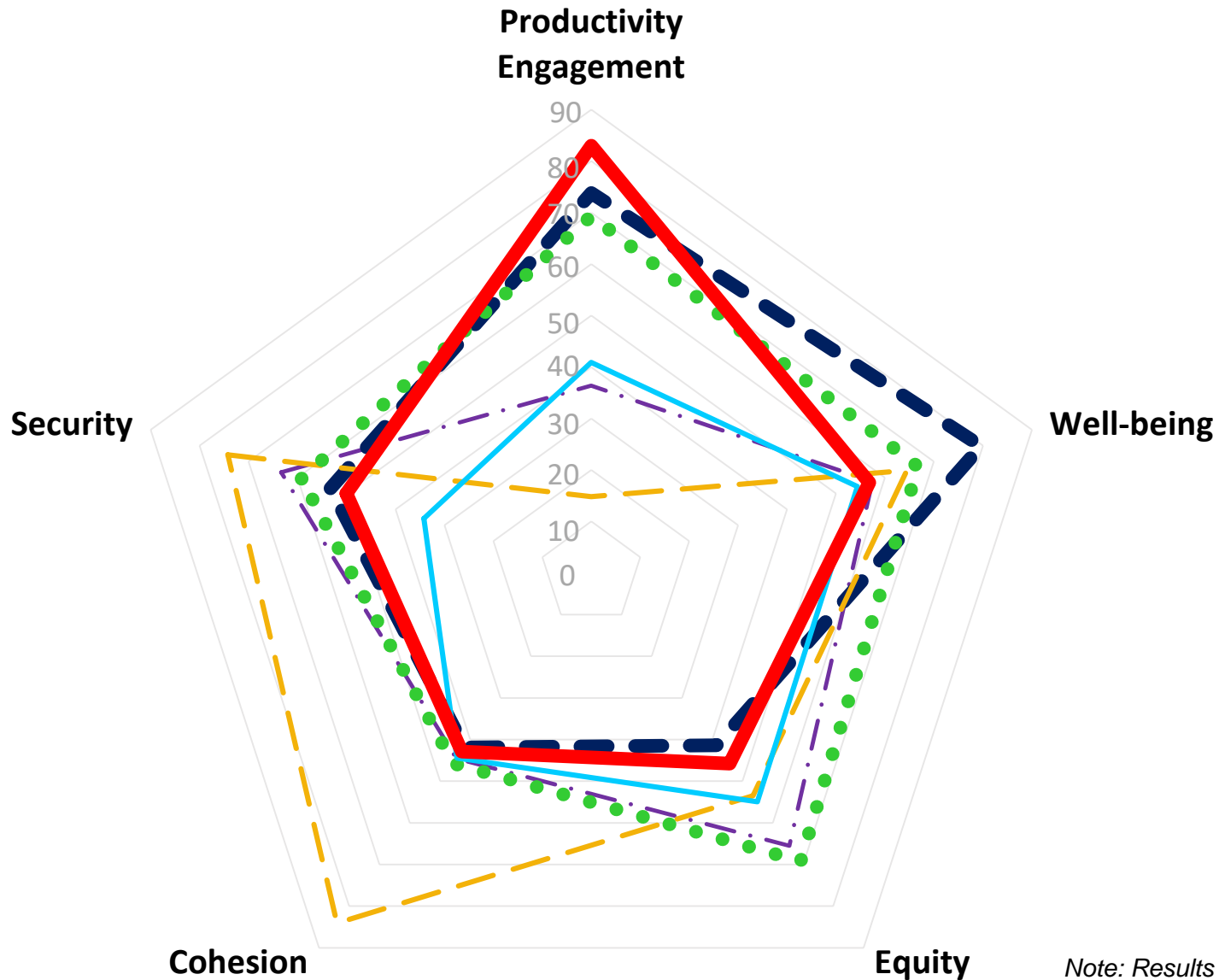
Note: Results use Goalpost method and within-domain measures are weighted by the MacArthur Research Network on an Aging Society.

Domains scores: Network weights

Domains	UK	Spain	Germany	US	Japan	Sweden
Productivity Engagement	Moderate	Low	Moderate	High	High	High
Well-being	Moderate	Moderate	Moderate	Moderate	High	Moderate
Equity	Moderate	Moderate	High	Low	Low	High
Cohesion	Low	High	Low	Low	Low	Low
Security	Low	High	Moderate	Moderate	Moderate	Moderate

Domain scores: Original 6 countries

Germany Japan Spain Sweden United Kingdom United States



Note: Results use Goalpost method and within-domain measures are weighted by the MacArthur Research Network on an Aging Society.



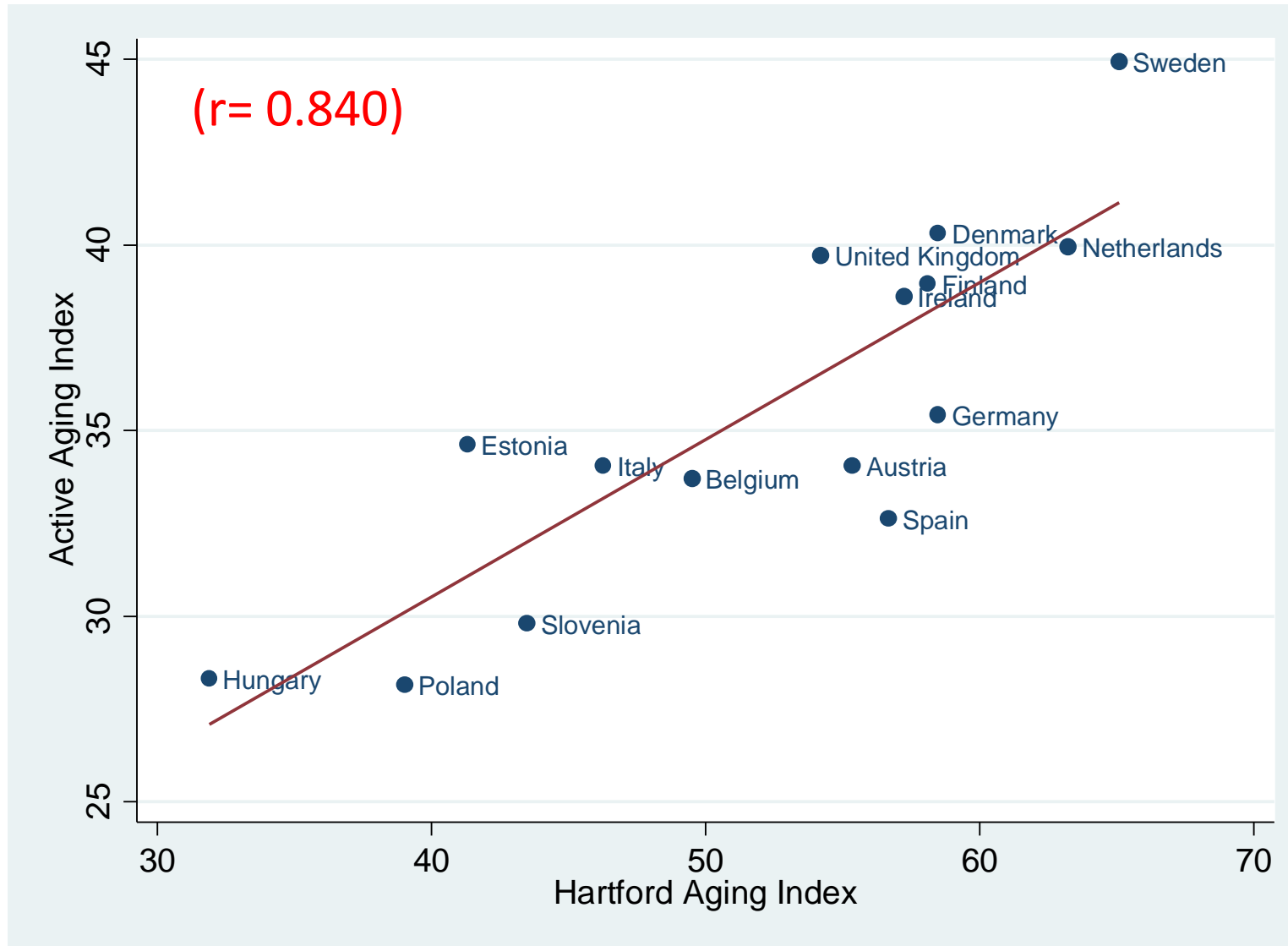
Comparison of Hartford Aging Index with other indices

Summary of indices

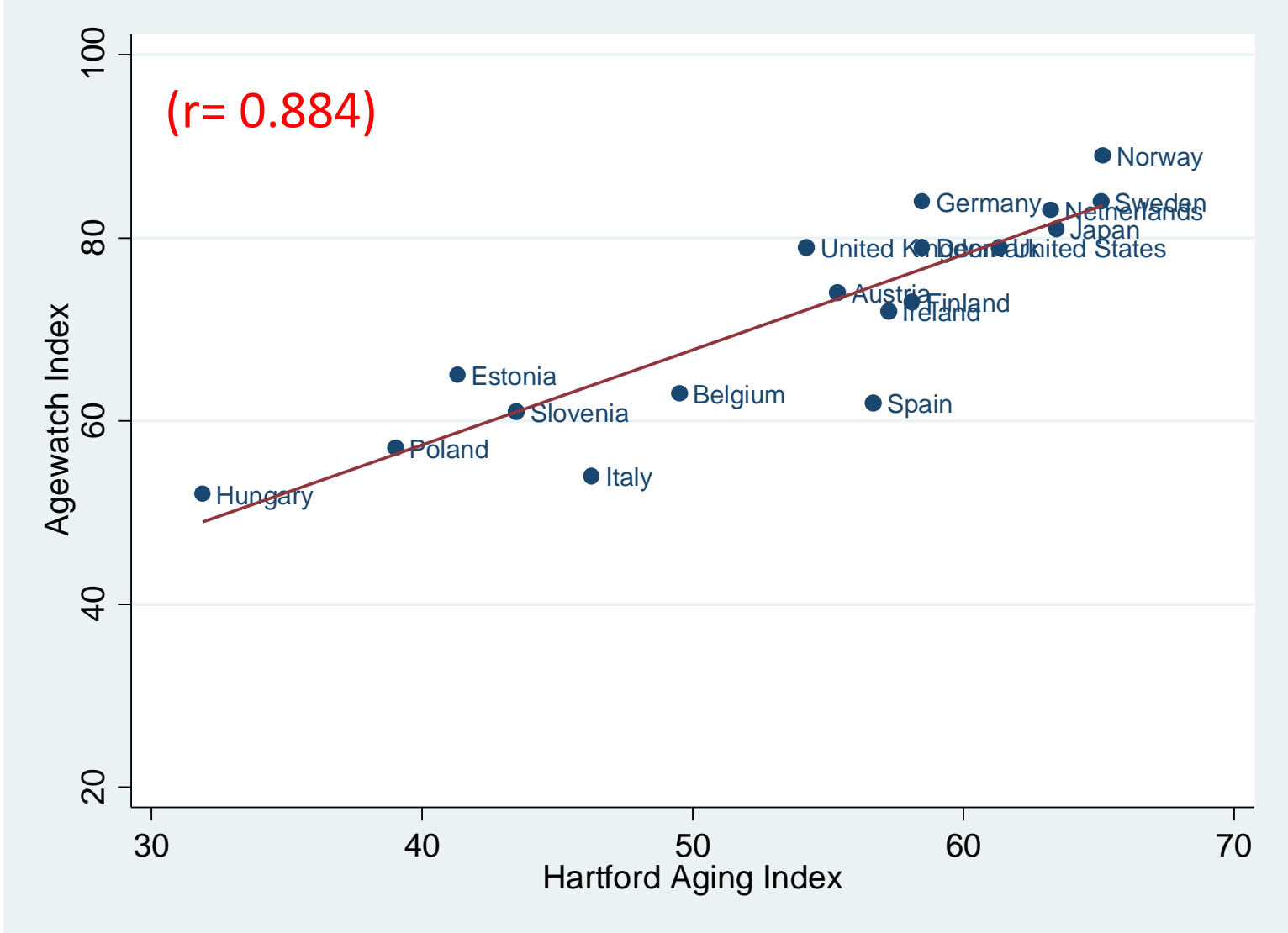
Aging index	Number of measures	Domains					Comments
		Productivity Engagement	Well-Being	Equity	Cohesion	Security	
Hartford Aging Index (Hartford Foundation)	22	√	√	√	√	√	
Active Aging Index (UNECE)	20	√	√	√*	√*		Not available for the US. Heavily weighted on employment (n=28 EU countries)
Global Agewatch Index (HelpAge Intl)	13	√	√	√*	√*	√	Does not fully capture inequalities (n=96 countries)
Human Development Index (UNDP)		√	√	√			Measures are not aging specific (n=199 countries)
Index of Well-Being (The Stanford Center on Longevity)	12		√		√*	√	Not available after 2006 (n=12 western industrialized countries)
Successful aging index (Milken Institute)	84	√	√	√	√	√	Only available for the USA.
Global aging preparedness index (CSIS and Jackson National Life Insurance)	15				√	√	Does not capture many characteristics of an aging society (n=20 countries)

√: available √*: available but limited

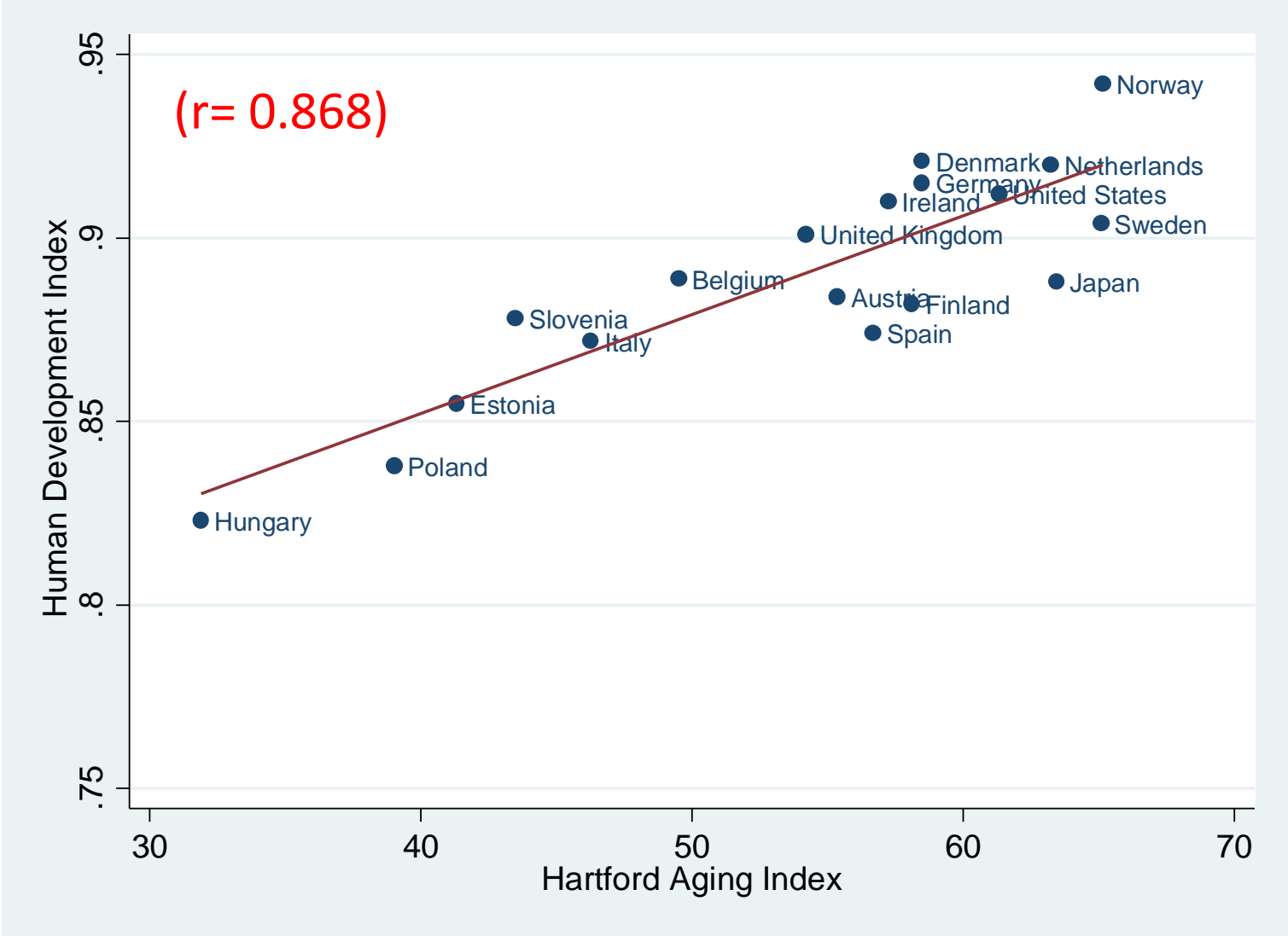
Correlation with Active Aging Index



Correlation with Global Agewatch Index

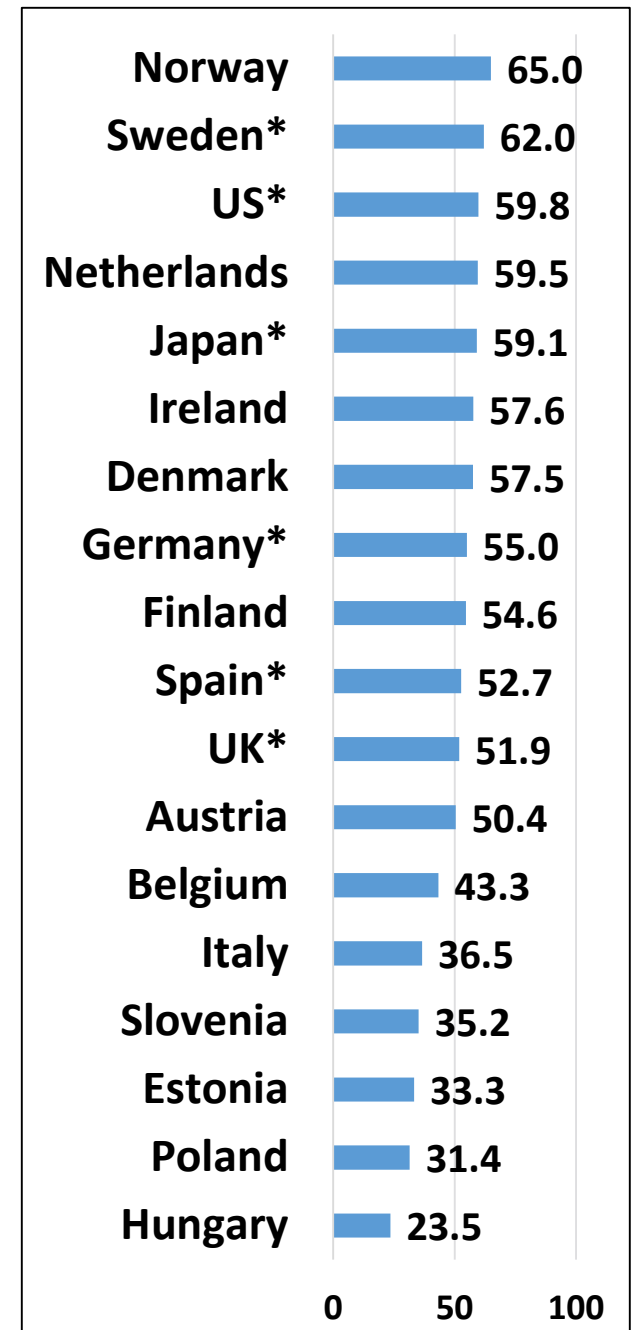


Correlation with Human Development Index



Conclusion

- **Hartford Aging Index highlights the core domains of a successful aging society**
- **Robust to different weighting schemes and methods**
- **Captures countries' demographic transformation using available data**
- **Use countries as a benchmark can highlight potential for improvements and emulate their strengths**
- **Analyze index scores in the context of existing policies provide insights into effective strategies for Successful Aging.**





Thank you