



# Balancing Adequacy and Sustainability in an Aging World

Insights from the  
Global Aging Preparedness Index

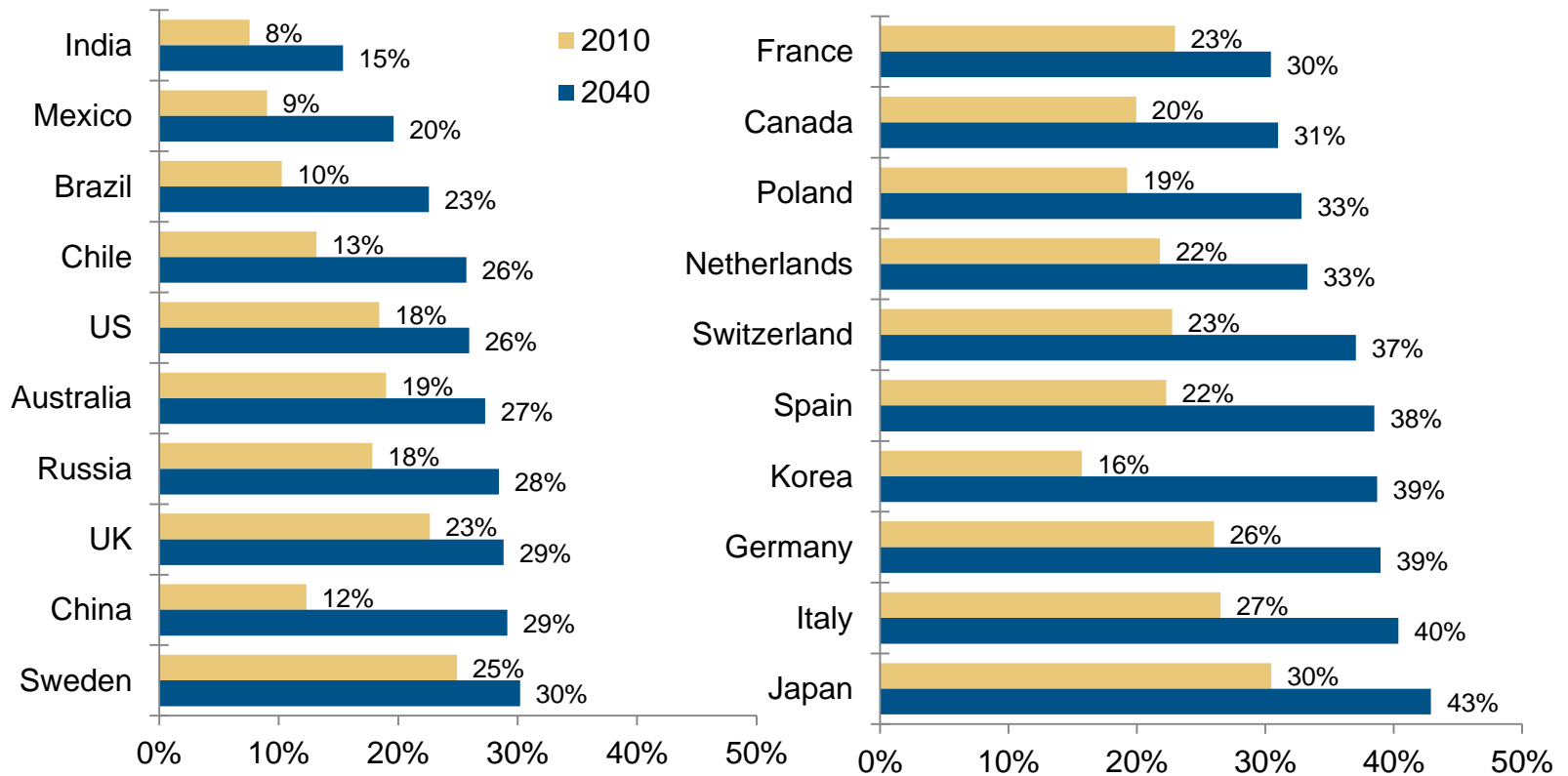
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[GAPINDEX.CSIS.ORG](http://GAPINDEX.CSIS.ORG)

# The Global Age Wave

Elderly (Aged 60 and Over), as a Percent of the Population in 2010 and 2040



# Some developed countries have made deep cuts in the future generosity of state retirement provision.

## Public Pension Benefits to the Elderly (Aged 60 & Over) as a Percent of GDP in 2010 and 2040 under Alternative Projections\*

	2010	"Current Deal" in 2040	"Current Law" in 2040	Current-Law % Reduction in 2040
1 Netherlands	4.6%	9.0%	8.6%	-4.7%
2 Sweden	7.5%	10.4%	8.4%	-19.1%
3 US	4.8%	8.2%	6.4%	-21.8%
4 Australia	3.7%	6.2%	4.7%	-24.2%
5 UK	7.5%	10.6%	7.9%	-25.9%
6 Canada	4.0%	8.1%	5.4%	-32.7%
7 France	12.6%	20.4%	13.6%	-33.5%
8 Germany	10.3%	19.9%	12.4%	-37.4%
9 Japan	9.3%	17.4%	10.5%	-39.5%
10 Italy	13.9%	28.0%	15.0%	-46.3%

\*The "current-deal" projection assumes that average retirement ages and replacement rates remain unchanged in the future.

**Note:** Countries are ranked from lowest to highest according to the current-law percent reduction in 2040.

# Informal support networks in many emerging markets will come under intense pressure from declining family size.

Average Number of Surviving Children of the Elderly: 2010-2040 and Change from 2010 to 2040

	2010	2020	2030	2040	Change		2010	2020	2030	2040	Change
1 Sweden	2.0	1.7	1.8	2.0	-0.1	11 Australia	2.7	2.1	2.0	2.0	-0.8
2 Poland	2.3	2.3	2.2	2.0	-0.3	12 Italy	2.2	2.1	1.4	1.4	-0.9
3 Russia	1.9	1.7	1.7	1.5	-0.4	13 Canada	2.6	1.8	1.6	1.7	-0.9
4 UK	2.3	1.8	1.8	1.9	-0.4	14 Chile	3.4	2.7	2.5	2.4	-1.0
5 France	2.4	1.9	1.8	1.9	-0.4	15 India	3.8	3.7	3.2	2.6	-1.1
6 Japan	2.0	1.9	1.7	1.5	-0.5	16 Spain	2.7	2.2	1.5	1.4	-1.2
7 Germany	1.9	1.4	1.4	1.4	-0.5	17 Korea	3.6	2.6	1.7	1.8	-1.7
8 Switzerland	2.0	1.6	1.5	1.6	-0.5	18 Brazil	3.9	3.1	2.4	2.1	-1.7
9 US	2.5	1.9	1.8	1.9	-0.6	19 China	4.3	3.3	2.2	2.0	-2.3
10 Netherlands	2.3	1.6	1.6	1.6	-0.6	20 Mexico	5.0	4.1	3.1	2.6	-2.4

Note: Countries are ranked from lowest to highest according to the projected change from 2010 to 2040.

# The GAP Index

- The GAP Index provides a comprehensive quantitative assessment of the progress that countries worldwide are making in preparing for the “old-age dependency” dimension of the global aging challenge.
- The GAP Index projections extend through the year 2040 in order to capture the full impact of the demographic transformation now sweeping the world.
- The GAP Index covers twenty countries, including both developed economies and emerging markets.
- The GAP Index consists of two separate subindices—a fiscal sustainability index and an income adequacy index.

## GAP Index Countries

**Australia**  
**Brazil**  
**Canada**  
**Chile**  
**China**  
**France**  
**Germany**  
**India**  
**Italy**  
**Japan**  
**Korea**  
**Mexico**  
**Netherlands**  
**Poland**  
**Russia**  
**Spain**  
**Sweden**  
**Switzerland**  
**UK**  
**US**

# GAP FISCAL SUSTAINABILITY INDEX

## PUBLIC BURDEN CATEGORY

Measures the magnitude of each country's projected public old-age dependency burden

### BENEFIT LEVEL INDICATOR

Total public benefits to the elderly in 2040 as a percent of GDP

### BENEFIT GROWTH INDICATOR

Growth in total public benefits to the elderly from 2010 to 2040 as a percent of GDP

## FISCAL ROOM CATEGORY

Measures each country's ability to accommodate the growth in its public old-age dependency burden by raising taxes, cutting other spending, or borrowing

### TAX ROOM INDICATOR

Total government revenue in 2040 as a percent of GDP, assuming taxes are raised to pay for all growth in public benefits

### BUDGET ROOM INDICATOR

Total public benefits to the elderly in 2040 as a percent of government outlays, assuming cuts in other spending pay for all growth in public benefits

### BORROWING ROOM INDICATOR

Net public debt in 2040 as a percent of GDP, assuming borrowing pays for all growth in public benefits

## BENEFIT DEPENDENCE CATEGORY

Measures how dependent the elderly in each country are on public benefits, and thus how politically difficult it may be to reduce those benefits

### BENEFIT SHARE INDICATOR

Public benefits as a percent of the cash income of the median-income elderly: Average for 2010 to 2040

### BENEFIT CUT INDICATOR

Percent of elderly households that would be pushed into poverty by an immediate 10 percent cut in public benefits

# GAP INCOME ADEQUACY INDEX

## TOTAL INCOME CATEGORY

Measures the overall level of and trend in the income of the elderly relative to the nonelderly in each country

### TOTAL INCOME LEVEL INDICATOR

Per capita ratio of average after-tax elderly to nonelderly total income in 2040

### TOTAL INCOME TREND INDICATOR

Percentage change in the per capita ratio of average after-tax elderly to nonelderly total income from 2010 to 2040

## INCOME VULNERABILITY CATEGORY

Measures income adequacy for “middle -income” elders and the extent of elderly poverty in each country

### MEDIAN INCOME LEVEL INDICATOR

Per capita ratio of median after-tax elderly to nonelderly cash income in 2040

### MEDIAN INCOME TREND INDICATOR

Percentage change in the per capita ratio of median after-tax elderly to nonelderly cash income from 2010 to 2040

### POVERTY LEVEL INDICATOR

Percent of the elderly with incomes beneath 50 percent of the median income for all persons in 2010 or the most recent available year

## FAMILY SUPPORT CATEGORY

Measures the strength of family support networks in each country

### FAMILY TIES INDICATOR

Percent of the elderly living in households with their adult children in 2010 or the most recent available year

### FAMILY SIZE INDICATOR

Change in the average number of surviving children of the elderly from 2010 to 2040

# GAP Index Country Rankings and Change from First Edition Rankings

Fiscal Sustainability Index			Income Adequacy Index		
1	India	-	1	Netherlands	-
2	Mexico	-	2	US	+1
3	Chile	-	3	Brazil	-1
4	China	-	4	Australia	+2
5	Russia	-	5	Germany	-1
6	Australia	+1	6	Sweden	+1
7	Sweden	+3	7	UK	-2
8	Canada	+1	8	Chile	-
9	Poland	-3	9	Canada	+2
10	Korea	+2	10	France	+6
11	US	-	11	Italy	+6
12	Switzerland	+1	12	Spain	-3
13	UK	+2	13	China	+5
14	Brazil	+4	14	Japan	-2
15	Japan	-7	15	India	-5
16	France	+3	16	Switzerland	-2
17	Netherlands	-	17	Mexico	+3
18	Germany	-4	18	Russia	-3
19	Italy	-3	19	Korea	-
20	Spain	-	20	Poland	-7



# In most countries, the elderly are highly dependent on public benefits.

## Public Benefits as a Percent of the Cash Income of the Median-Income Elderly, 2010-2040\*

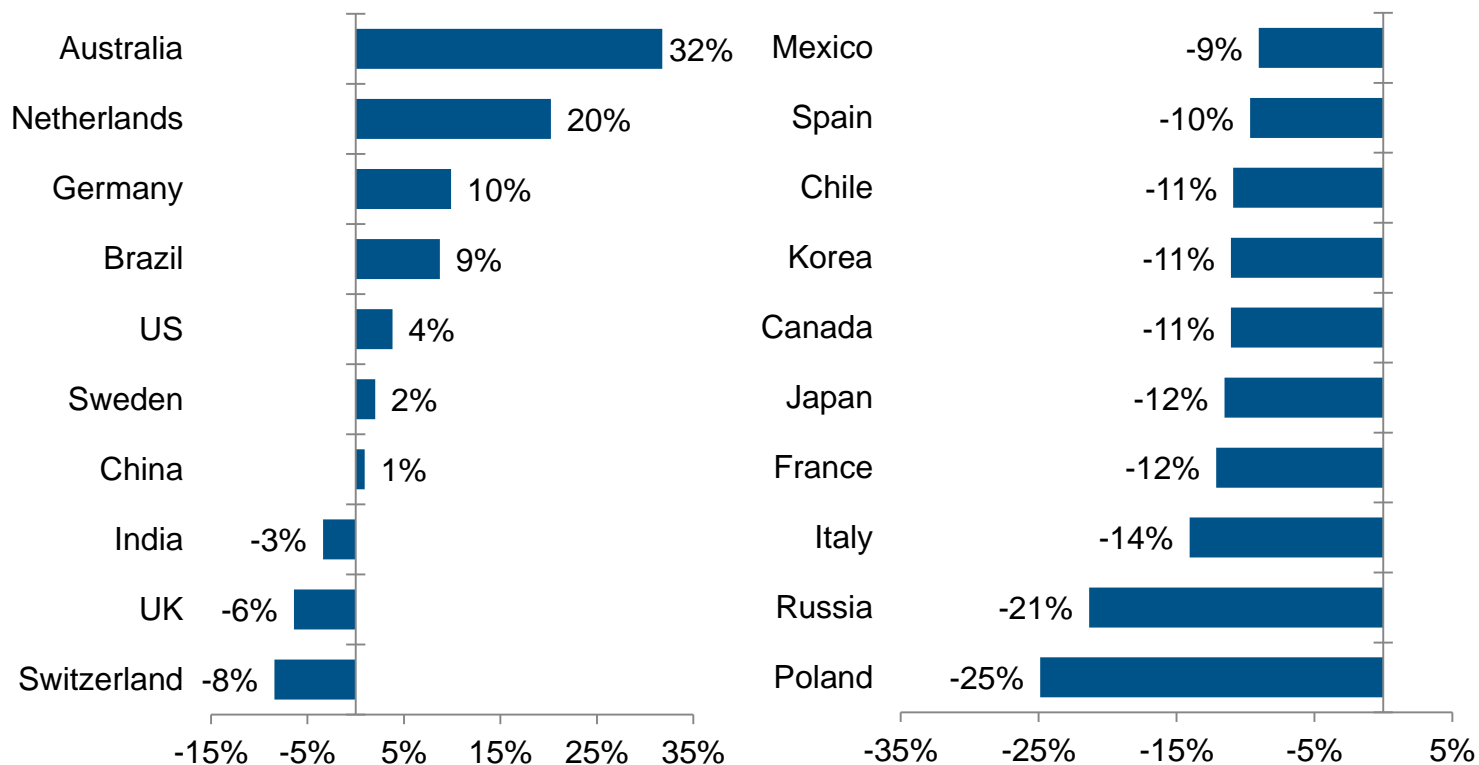
	2010	2020	2030	2040	Average 2010-40		2010	2020	2030	2040	Average 2010-40
1 India	25	25	22	19	<b>23</b>	11 Japan	60	57	54	54	<b>56</b>
2 Mexico	32	30	28	23	<b>29</b>	12 Sweden	63	62	59	58	<b>60</b>
3 Switzerland	33	32	30	32	<b>32</b>	13 UK	66	62	61	62	<b>62</b>
4 Korea	26	30	35	40	<b>33</b>	14 Russia	69	66	63	55	<b>63</b>
5 US	39	35	36	37	<b>37</b>	15 Germany	73	66	60	60	<b>64</b>
6 Chile	55	39	30	26	<b>37</b>	16 Brazil	75	65	62	63	<b>65</b>
7 China	34	37	37	41	<b>37</b>	17 France	73	71	70	71	<b>71</b>
8 Canada	39	39	39	39	<b>39</b>	18 Italy	78	74	70	68	<b>72</b>
9 Netherlands	50	50	50	51	<b>50</b>	19 Spain	79	75	71	71	<b>74</b>
10 Australia	64	56	50	46	<b>54</b>	20 Poland	94	89	85	79	<b>87</b>

Note: Countries are ranked from best to worst according to the projected averages for 2010 to 2040.

\* Data refer to the third quintile of the elderly income distribution.

# Under current law, the elderly in many countries may experience a decline in living standards.

Percentage Change in the Per Capita Ratio of Median After-Tax Elderly to Nonelderly Cash Income from 2010 to 2040\*



Note: Countries are ranked from best to worst.

\* Data for both the elderly and nonelderly refer to the third quintile of the income distribution.

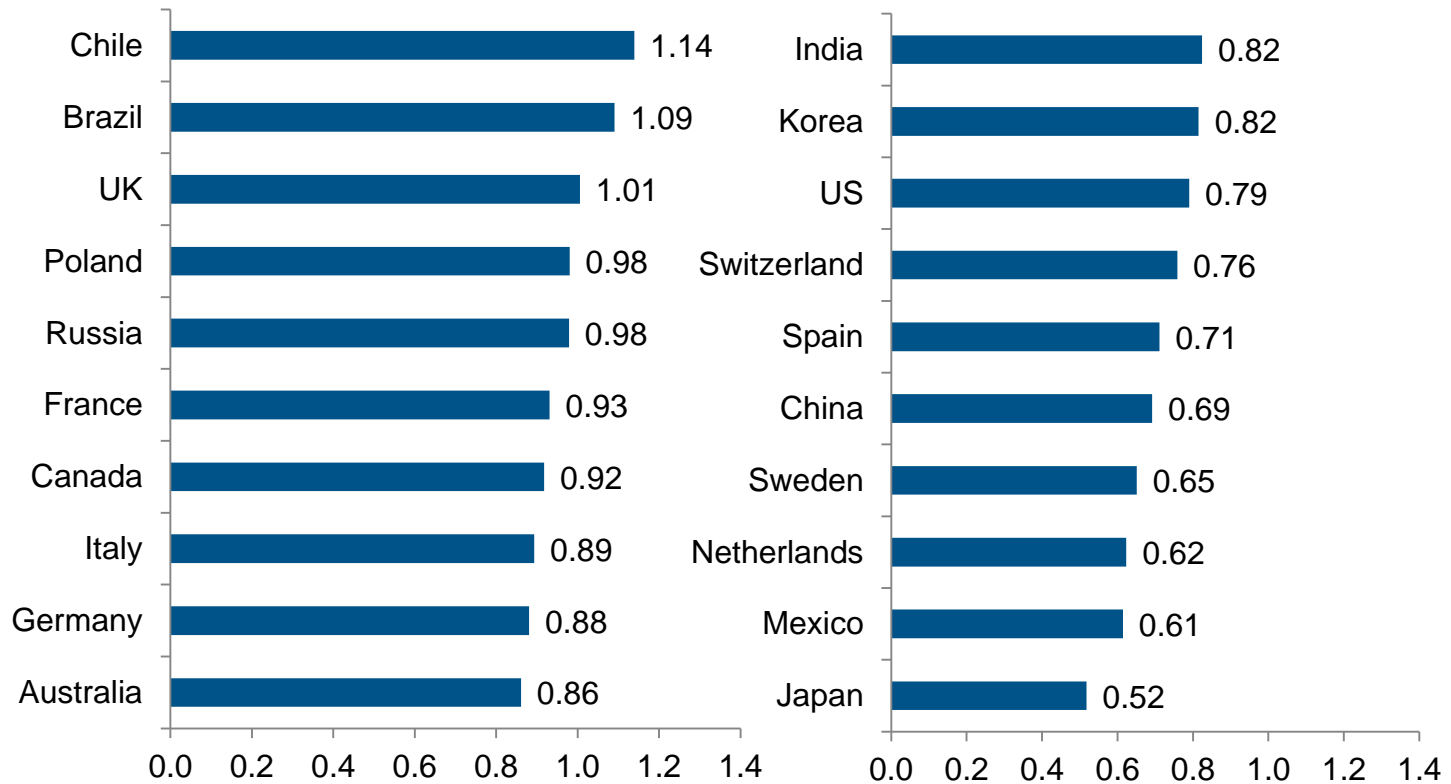
# Directions for Reform

# Five Policy Imperatives

- Reduce the rising fiscal burden of pay-as-you-go state retirement provision.
- Strengthen old-age safety nets through social pensions and/or means-tested supplements.
- Increase funded retirement provision.
- Promote productive aging and ensure that work spans rise along with life spans and health spans.
- Refashion the overall role of the state in retirement provision so that it serves less as a retirement income floor for all of the elderly and more as a retirement income backstop for the “old elderly.”

# Old Elderly versus Young Elderly: Lower Incomes

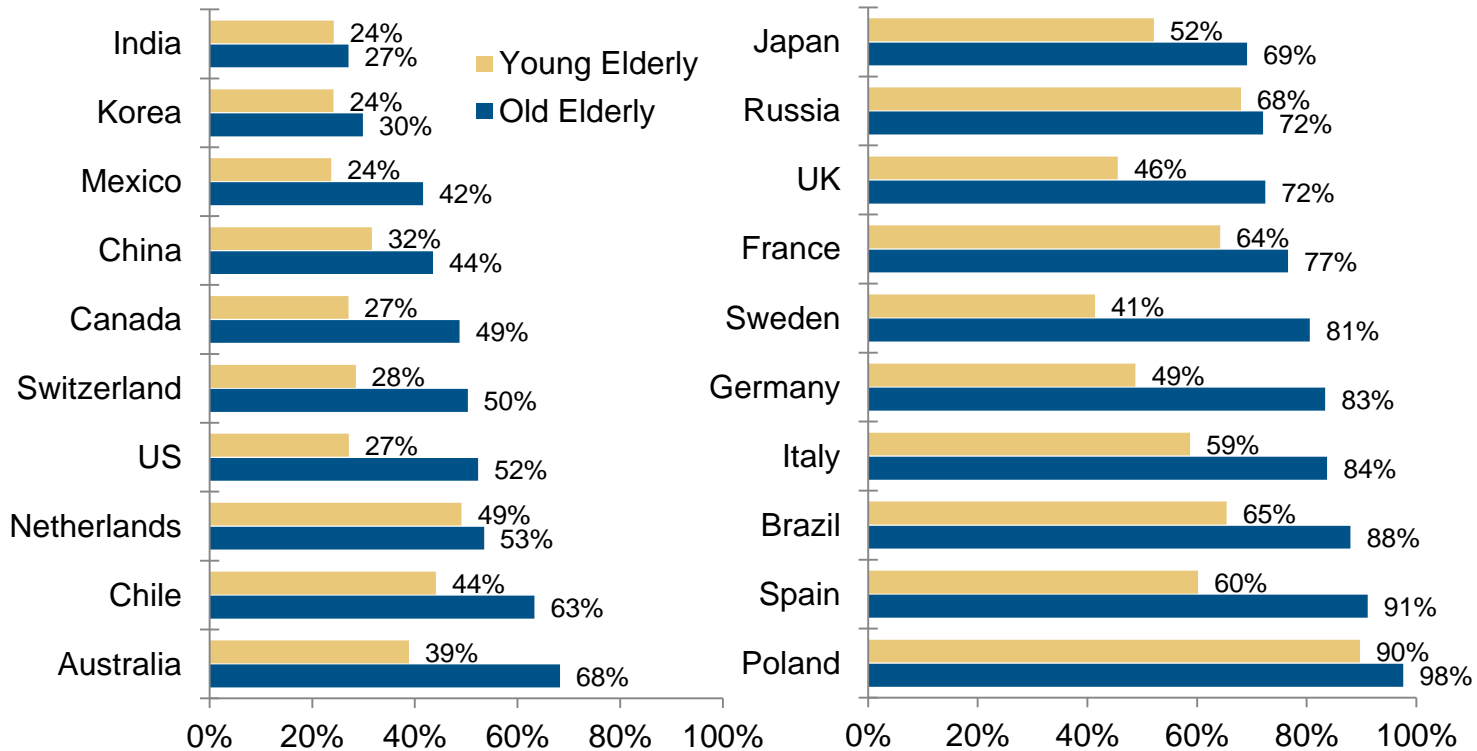
Per Capita Ratio of Average After-Tax Old Elderly (Aged 70 & Over) to Young Elderly (Aged 60-69) Cash Income in 2010



Note: Countries are ranked from best to worst.

# Old Elderly versus Young Elderly: Higher Benefit Dependence

Public Benefits as a Percent of the Cash Income of the Median-Income Young Elderly (Aged 60-69) and Median-Income Old Elderly (Aged 70 & Over) in 2010\*



Note: Countries are ranked from best to worst according to the public benefit share of the old elderly.

\* Data refer to the third quintile of the elderly income distribution.