

Public sector achievement in 36 countries  
A comparative assessment of inputs, outputs and outcomes

## Appendices

Editor: Benedikt Goderis

Contributors: Andries van den Broek, Simone Croezen, Benedikt Goderis, Marietta Haffner, Pepijn van Houwelingen, Sjoerd Kooiker, Lonneke van Noije, Evert Pommer, Lisa Putman, Michiel Ras, Annet Tiessen-Raaphorst, Ab van der Torre, Debbie Verbeek-Oudijk, Cok Vrooman and Isolde Woittiez

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## Appendix Chapter 2 Education

Table A2.1: Mean PISA maths and reading scores

Country										Change (avg. of maths and reading)
	Mathematics				Reading					2003-2012
	2003	2006	2009	2012	2000	2003	2006	2009	2012	
<b>I. Western Europe</b>										
Germany	503	504	513	514	484	491	495	497	508	+13
Switzerland	527	530	534	531	494	499	499	501	509	+7
Ireland	503	501	487	501	527	515	517	496	523	+3
Luxembourg	493	490	489	490	.	479	479	472	488	+3
United Kingdom	.	495	492	494	.	.	495	494	499	+1(*)
Austria	506	505	.	506	492	491	490	.	490	-1
France	511	496	497	495	505	496	488	496	505	-3
Belgium	529	520	515	515	507	507	501	506	509	-7
Netherlands	538	531	526	523	.	513	507	508	511	-8
<b>II. Northern Europe</b>										
Norway	495	490	498	489	505	500	484	503	504	-1
Denmark	514	513	503	500	497	492	494	495	496	-5
Finland	544	548	541	519	546	543	547	536	524	-22
Sweden	509	502	494	478	516	514	507	497	483	-31
<b>III. Southern Europe</b>										
Italy	466	462	483	485	487	476	469	486	490	+17
Portugal	466	466	487	487	470	478	472	489	488	+16
Greece	445	459	466	453	474	472	460	483	477	+6
Spain	485	480	483	484	493	481	461	481	488	+3
Cyprus	.	.	.	440	.	.	.	.	449	.
Malta	.	.	.	.	.	.	.	.	.	.
<b>IV. Central and Eastern Europe</b>										
Romania	.	415	427	445	428	.	396	424	438	+36(*)
Bulgaria	.	413	428	439	430	.	402	429	436	+30(*)
Poland	490	495	495	518	479	497	508	500	518	+24
Estonia	.	515	512	521	.	.	501	501	516	+11(*)
Croatia	.	467	460	471	.	.	477	476	485	+6(*)
Latvia	483	486	482	491	458	491	479	484	489	+3
Lithuania	.	486	477	479	.	.	470	468	477	0(*)
Hungary	490	491	490	477	480	482	482	494	488	-3
Czech Republic	516	510	493	499	492	489	483	478	493	-7
Slovenia	.	504	501	501	.	.	494	483	481	-8(*)
Slovak Republic	498	492	497	482	.	469	466	477	463	-11
<b>V. Oceania</b>										
Australia	524	520	514	504	528	525	513	515	512	-17
New Zealand	523	522	519	500	529	522	521	521	512	-17
<b>VI. Northern America</b>										
United States	483	474	487	481	504	495	.	500	498	0
Canada	532	527	527	518	534	528	527	524	523	-10
<b>VII. Eastern Asia</b>										
Japan	534	523	529	536	522	498	498	520	538	+21
Korea	542	547	546	554	525	534	556	539	536	+7

Notes: Data from OECD (2014a). A dot refers to missing data. An asterisk between parentheses indicates that, due to missing data for 2003, the 2006-2012 change is reported instead. Due to rounding, the mean maths and reading scores do not always exactly add up to the changes reported in the final column.

Table A2.2: Regional average PISA maths and reading scores

Region	Mathematics				Reading				
	2003	2006	2009	2012	2000	2003	2006	2009	2012
I. Western Europe	514 (4)	508 (4)	507 (4)	508 (2)	501 (5)	499 (5)	497 (5)	496 (5)	505 (4)
II. Northern Europe	516 (3)	513 (3)	509 (3)	497 (5)	516 (4)	512 (4)	508 (4)	508 (4)	502 (5)
III. Southern Europe	465 (7)	467 (7)	480 (6)	470 (7)	481 (6)	477 (7)	465 (7)	485 (6)	478 (7)
IV. Central and Eastern Europe	496 (6)	480 (6)	478 (7)	484 (6)	461 (7)	485 (6)	469 (6)	474 (7)	480 (6)
V. Oceania	524 (2)	521 (2)	517 (2)	502 (3)	529 (1)	523 (1)	517 (3)	518 (2)	512 (2)
VI. Northern America	508 (5)	501 (5)	507 (5)	500 (4)	519 (3)	512 (3)	527 (2)	512 (3)	510 (3)
VII. Eastern Asia	538 (1)	535 (1)	538 (1)	545 (1)	523 (2)	516 (2)	527 (1)	530 (1)	537 (1)

Notes: Data from OECD (2014a). The ranking position of regions is indicated between parentheses.

Table A2.3: Mean PISA science scores

Country	Science			Change 2006-2012
	2006	2009	2012	
<b>I. Western Europe</b>				
Ireland	508	508	522	+14
Germany	516	520	524	+8
Luxembourg	486	484	491	+5
France	495	498	499	+4
Switzerland	512	517	515	+4
United Kingdom	515	514	514	-1
Netherlands	525	522	522	-3
Austria	511	.	506	-5
Belgium	510	507	505	-5
<b>II. Northern Europe</b>				
Norway	487	500	495	+8
Denmark	496	499	498	+3
Finland	563	554	545	-18
Sweden	503	495	485	-19
<b>III. Southern Europe</b>				
Italy	475	489	494	+18
Portugal	474	493	489	+15
Spain	488	488	496	+8
Greece	473	470	467	-7
Malta	.	.	.	.
Cyprus	.	.	438	.
<b>IV. Central and Eastern Europe</b>				
Poland	498	508	526	+28
Romania	418	428	439	+20
Latvia	490	494	502	+13
Bulgaria	434	439	446	+12
Estonia	531	528	541	+10
Estonia	531	528	541	+10
Lithuania	488	491	496	+8
Croatia	493	486	491	-2
Czech Republic	513	500	508	-5
Slovenia	519	512	514	-5
Hungary	504	503	494	-10
Slovak Republic	488	490	471	-17
<b>V. Oceania</b>				
Australia	527	527	521	-5
New Zealand	530	532	516	-15
<b>VI. Northern America</b>				
United States	489	502	497	+9
Canada	534	529	525	-9
<b>VII. Eastern Asia</b>				
Korea	522	538	538	+16
Japan	531	539	547	+15

Notes: A dot refers to missing data. Due to rounding, the mean science scores do not always exactly add up to the changes reported in the final column.

Table A2.4: Estimation results – determinants of average student test scores across countries

Variable group	Explanatory variable	(1)	(2)
Family background	GDP per capita, PPP (USD 1,000)	-0.231 (0.635)	0.173** (0.082)
School inputs	Cumulative educational expenditure per student between age 6 and 15, PPP (USD 1,000)	0.027 (0.192)	
Institutions (accountability)	External exams	0.803** (0.351)	
Institutions (accountability)	Assessments used for retention/promotion	-0.005 (0.133)	-0.062 (0.081)
Institutions (accountability)	Assessments used to compare schools	-0.137 (0.175)	0.096 (0.112)
Institutions (accountability)	Assessments used to group students	0.180 (0.224)	0.230 (0.145)
Institutions (accountability)	Monitoring of lessons by principal	0.077 (0.180)	-0.082 (0.121)
Institutions (accountability)	Monitoring of lessons by external inspectors	0.193 (0.211)	-0.208 (0.139)
Institutions (autonomy)	Autonomy in formulating budget	0.565 (0.334)	-0.128 (0.130)
	External exams x Autonomy in formulating budget	-0.002 (0.004)	0.004** (0.002)
Institutions (autonomy)	Autonomy in establishing starting salaries	-1.156** (0.439)	-0.125 (0.111)
	External exams x Autonomy in establishing starting salaries	0.007 (0.005)	0.000 (0.002)
Institutions (autonomy)	Autonomy in determining course content	0.025 (0.312)	-0.223 (0.152)
	External exams x Autonomy in determining course content	0.008** (0.004)	0.000 (0.002)
Institutions (autonomy)	Autonomy in hiring teachers	0.951*** (0.278)	0.182** (0.085)
	External exams x Autonomy in hiring teachers	-0.017*** (0.003)	-0.000 (0.002)
Institutions (choice)	Privately operated schools	0.291 (0.196)	0.056 (0.078)
Institutions (choice)	Government funding	1.362*** (0.290)	-0.149 (0.138)
Country fixed effects		NO	YES
Subject fixed effects		YES	YES
Year fixed effects		YES	YES
Number of observations		224	361
R-squared		0.68	0.96

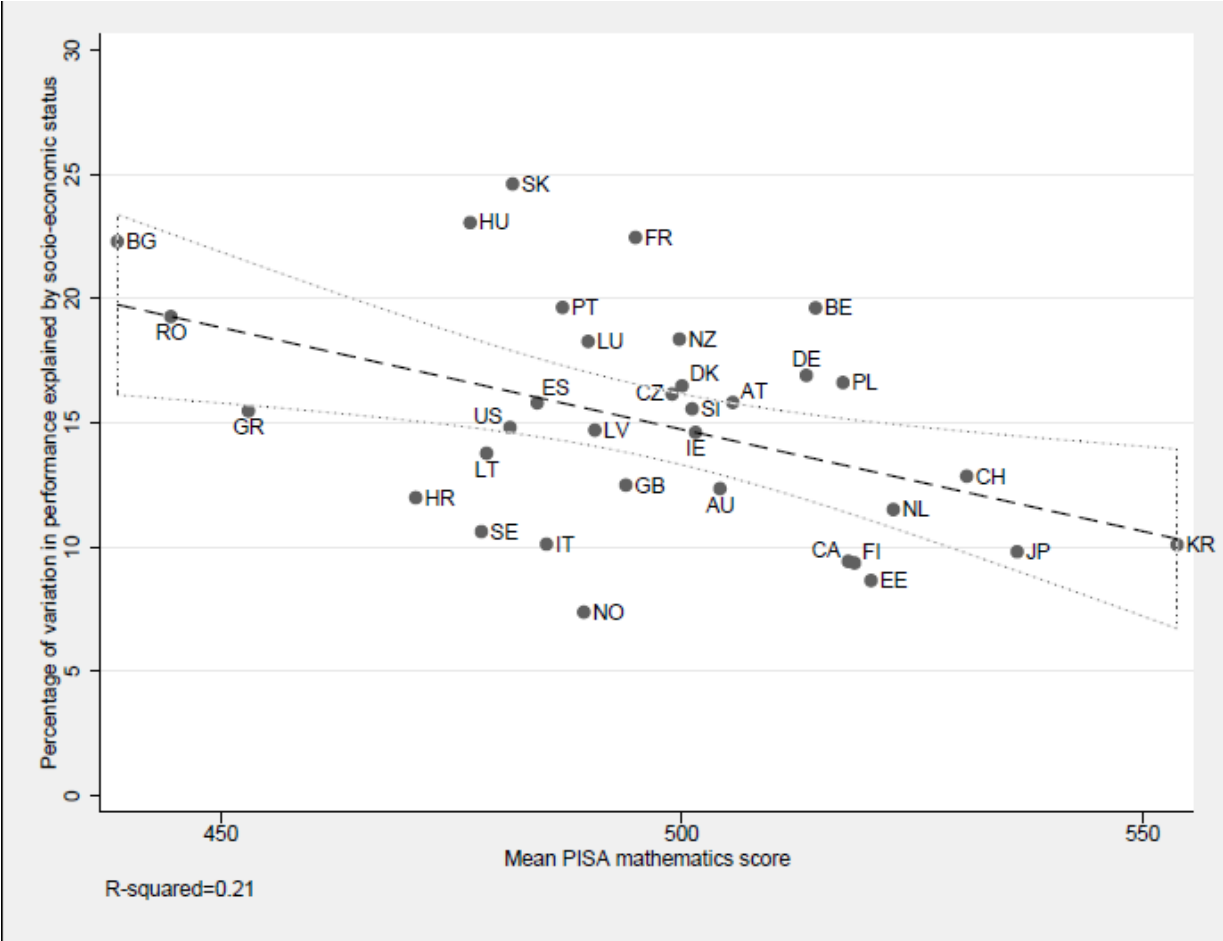
Notes: The dependent variable is the mean PISA test score. Robust standard errors (clustered by country) are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10% levels, respectively.

Table A2.5: Estimation results – testing convergence

Variable group	Explanatory variable	(1)
Convergence parameter	Mean PISA test score (2006)	-0.268*** (0.069)
Lagged change	2003-2006 change in mean PISA test score	-0.469** (0.180)
Family background	GDP per capita, PPP (USD 1,000)	0.313* (0.162)
Institutions (accountability)	External exams	0.623*** (0.134)
Institutions (accountability)	Assessments used for retention/promotion	-0.055 (0.063)
Institutions (accountability)	Assessments used to compare schools	0.252** (0.119)
Institutions (accountability)	Assessments used to group students	-0.136 (0.140)
Institutions (accountability)	Monitoring of lessons by principal	0.451*** (0.079)
Institutions (accountability)	Monitoring of lessons by external inspectors	-0.241** (0.098)
Institutions (autonomy)	Autonomy in formulating budget	0.557*** (0.134)
	External exams x Autonomy in formulating budget	-0.012*** (0.001)
Institutions (autonomy)	Autonomy in establishing starting salaries	-0.595*** (0.110)
	External exams x Autonomy in establishing starting salaries	0.005*** (0.002)
Institutions (autonomy)	Autonomy in determining course content	0.095 (0.132)
	External exams x Autonomy in determining course content	-0.001 (0.002)
Institutions (autonomy)	Autonomy in hiring teachers	-0.268* (0.145)
	External exams x Autonomy in hiring teachers	0.002 (0.002)
Institutions (choice)	Privately operated schools	0.461*** (0.134)
Institutions (choice)	Government funding	-0.043 (0.143)
Country fixed effects		NO
Subject fixed effects		YES
Number of observations		65
R-squared		0.78

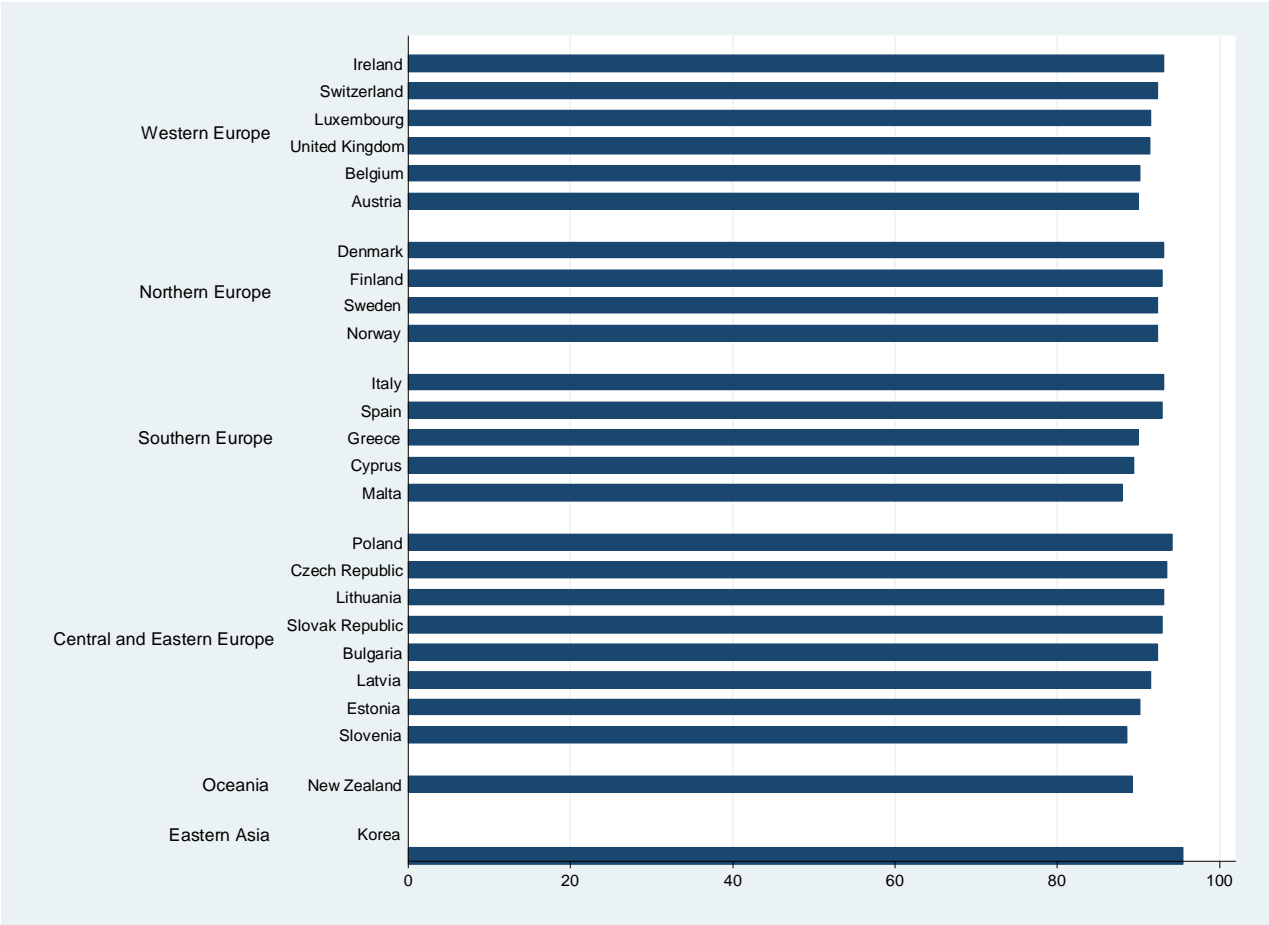
Notes: The dependent variable is the 2006-2012 change in the mean PISA test score. Robust standard errors (clustered by country) are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10% levels, respectively.

Figure A2.1: Average maths performance and inequality based on socio-economic status (2012)



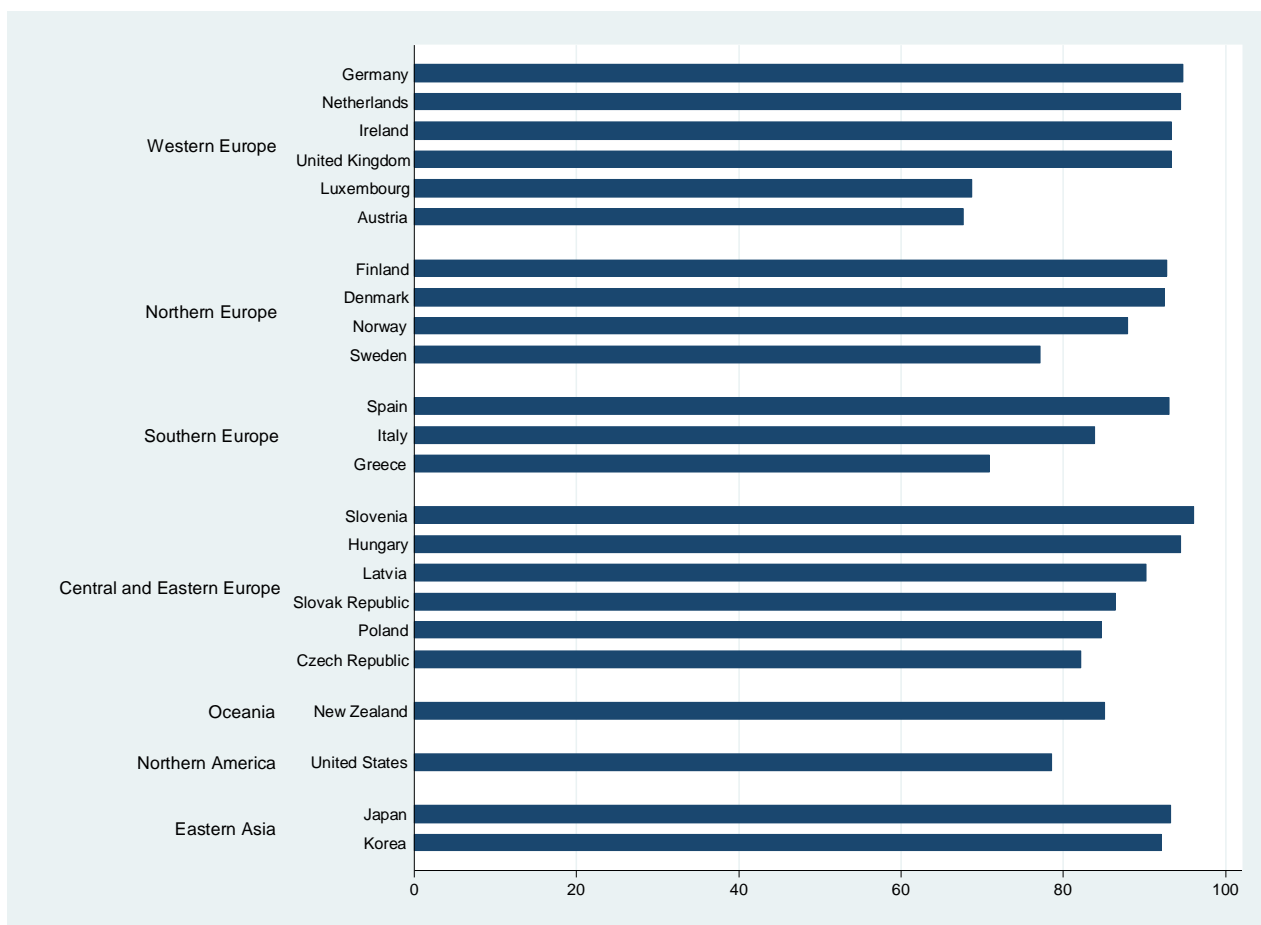
Notes: Data from OECD (2014b). See Chapter 1 for a list of countries and country abbreviations. The dashed and dotted lines represent the regression line and the 95% confidence interval of a bivariate regression of the percentage of variation explained by socioeconomic status on the mean maths score.

Figure A2.2: Percentage of students agreeing with statements reflecting democratic values (2009)



Notes: Data from Schulz et al. (2010). No data are available for Australia, Canada, Croatia, France, Germany, Hungary, Japan, the Netherlands (did not meet sampling requirements), Portugal, Romania and the United States. Data for the United Kingdom and Belgium relate to England and Flanders, respectively. Denmark, Switzerland, the United Kingdom (nearly), New Zealand, Norway, Belgium, and Czech Republic met the guidelines for sampling participation rates only after replacement schools were included. In Korea, the same cohort was surveyed but the survey took place later.

Figure A2.3: Upper secondary graduation rates (first-time graduates), 2012 (in percentages)



Notes: Data were obtained from the OECD online database (no data for Australia, Belgium, Bulgaria, Canada, Croatia, Cyprus, Estonia, France, Lithuania, Malta, Portugal, Romania and Switzerland). For Austria, programmes spanning ISCED levels 3 and 4 (“Höhere berufsbildende Schule”) are not included. The net graduation rates reported in this figure represent the proportion of members of a synthetic age cohort who graduate (for the first time) from an upper secondary programme at some point during their lives. The net graduation rate is defined as the sum of net graduation rates for single ages. The total net graduation rate is therefore the sum of the proportions of (first-time) tertiary graduates type A aged  $i$  to the total population aged  $i$ , at all ages (OECD 2014b).

## REFERENCES

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Schulz, Wolfram, John Ainley, Julian Fraillon, David Kerr and Bruno Losito (2010). *International Civic and Citizenship Education Study (ICCS) 2009 International Report: Civic knowledge, attitudes and engagement among lower secondary school students in thirty-eight countries*. Amsterdam: International Association for the Evaluation of Educational Achievement (IEA).



## Appendix Chapter 3 Health

**Table A3.1 Relative duration of disability-free life years by country (%DFLE/LE), 1995-2012 (in percentages)**

	1995	2000	2005	2010	2012
<b>Western Europe</b>					
Ireland	86.7	85.2	80.0	82.2	83.1
Switzerland				78.1	82.4
Luxembourg			78.6	81.1	81.2
Belgium	84.5	86.8	79.0	79.0	80.7
United Kingdom	79.6	78.9	81.9	81.0	80.5 <sup>a</sup>
France	78.8	78.2	79.2	76.8	76.9 <sup>a</sup>
Austria	81.9	84.9	74.5	74.6	75.8
Netherlands	79.6	78.0	81.2	75.1	75.5
Germany	81.2	82.1	69.0	72.5	71.3
<b>Northern Europe</b>					
Norway			81.3	86.1	87.4
Sweden		78.5	79.2	87.5	86.7
Denmark	81.4	81.2	87.5	78.1	76.2
Finland		73.1	66.0	72.9	70.5
<b>Southern Europe</b>					
Malta			87.7	87.2	89.3
Greece	87.0	86.3	84.2	83.1	80.5
Spain	84.8	86.0	79.0	78.2	79.2
Cyprus			75.0	79.4	78.5
Italy	87.6	89.7	83.3	82.1	76.4 <sup>a</sup>
Portugal	81.7	80.0	74.2	72.9	74.3 <sup>a</sup>
<b>Central and Eastern Europe</b>					
Bulgaria				88.2	86.0
Croatia				76.9	82.0
Czech Republic			77.7	81.6	81.0
Lithuania			74.8	82.1	80.1
Hungary			73.2	77.1	79.8
Poland			85.4	79.2	79.5
Romania				78.1	77.6
Latvia			73.7	75.2	77.2
Estonia			69.5	74.3	72.2
Slovak Republic			75.6	69.4	70.1
Slovenia			75.3	67.8	70.0
<b>Oceania</b>					
Australia					
New Zealand					
<b>Northern America</b>					
Canada					
United States					

Eastern Asia

Japan

Korea

a Information from 2011.

Source: Eurostat (Healthy life years, 2014) SCP treatment

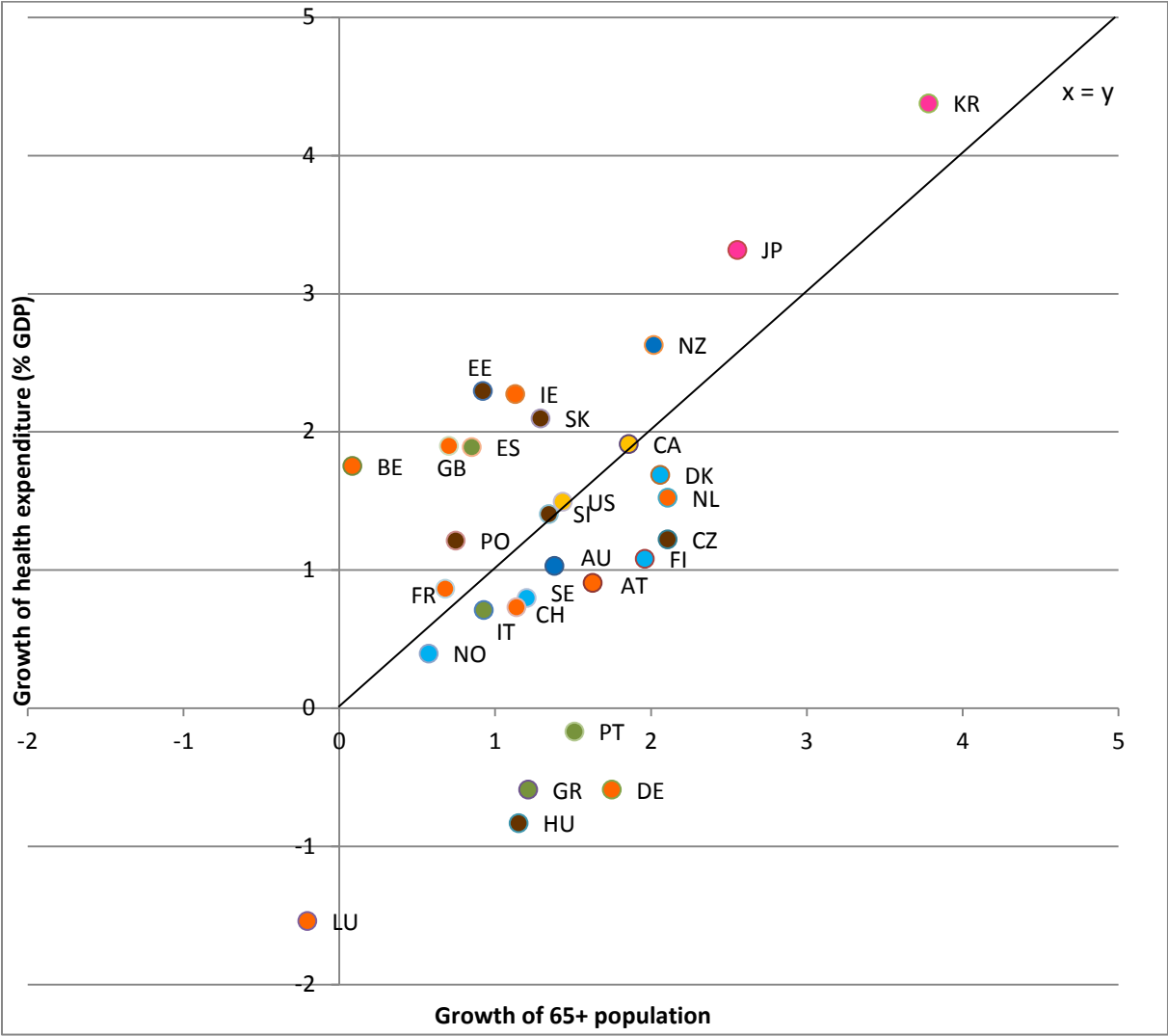
Note: There are some methodological issues with this indicator. In several of the countries studied there has been a change in the wording of the disability question to improve the comparability between countries. This may have influenced the trends over time. However, these trends follow the trend in other health measures, so the comparability issues may not be the sole cause for the observed trends in DFLE. Furthermore, people in nursing homes are not included here. As a result, the prevalence of disability is underestimated in the calculation of DFLE. Differences between countries in DFLE could therefore be partly attributable to the percentage of people living in institutions

**Table A3.2 Catch-up effect between 2012 and 2000**

<b>Variable group</b>	<b>Explanatory variable</b>	<b>(1)</b>
Catch-up	Health outcomes in 2000	-0.337*** (0.071)
	Change in health outcomes 2000-1990	-0.026 (0.093)
Socioeconomic	GDP per capita, PPP (USD 1,000) in 2000	0.002 (0.002)
Health care system	Total health expenditure as percentage of GDP in 2000	-0.047 (0.039)
Constant		1.148** (0.317)
Number of observations		26
R-squared		0.63

Notes: The dependent variable is the change in the health outcome index score between 2012 and 2000. Robust standard errors (clustered by country) are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. Covariates are not available for all 36 countries.

Figure A3.1 Growth in population aged over 65 years versus growth in health expenditure as a share of GDP, 2005-2012 (in percentages per year)



Source: OECD (<http://stats.oecd.org/>) and Eurostat(<http://ec.europa.eu/eurostat/data/database>) SCP treatment

## Appendix Chapter 5 Housing

### A5.1 Tenure patterns

Table A5.1 Long-term changes in tenure, households (in percentages)

		oldest avail- able year	rent	owner- occupied	coope- rative	other	newest avail- able year	rent	owner- occupied	coope- rative	other	
Western Europe	Austria <sup>a</sup>	1980	43	52	0	5	2009	40	56	0	4	
	Belgium <sup>b</sup>	1981	38	59	0	3	2009	31	68	0	0	
	France <sup>c</sup>	1978	41	47	0	12	2006	39	57	0	4	
	Germany <sup>d</sup>	1980	61	39	0	0	2008	54	46	0	0	
	Ireland <sup>b</sup>	1980	24	76	0	0	2004	21	79	0	0	
	Luxembourg	1981	39	60	0	1	2008	29	70	0	1	
	Netherlands <sup>c</sup>	1980	58	42	0	0	2009	42	58	0	0	
	Switzerland	.	.	.	.	.	.	.	.	.	.	.
	United Kingdom	1981	42	58	0	0	2004	31	69	0	0	
Northern Europe	Denmark	1980	43	55	1	1	2009	39	46	7	7	
	Finland	1980	30	63	0	7	2008	31	66	0	3	
	Norway	.	.	.	.	.	.	.	.	.	.	
	Sweden <sup>e</sup>	1980	42	42	16	0	2008	44	38	18	0	
Southern Europe	Cyprus <sup>f</sup>	1982	16	61	0	23	2001	14	68	0	18	
	Greece	1981	27	70	0	3	2004	20	74	0	6	
	Italy	1980	36	59	0	5	2008	19	69	0	13	
	Malta	2000	22	74	0	4	2005	22	75	0	3	
	Portugal	1981	39	52	0	5	2001	21	75	0	4	
	Spain	1981	21	73	0	6	2008	13	85	0	2	
Central and Eastern Europe	Bulgaria	.	.	.	.	.	.	.	.	.	.	
	Croatia	.	.	.	.	.	.	.	.	.	.	
	Czech Republic	1980	40	40	13	7	2001	29	47	17	7	
	Estonia	2004	4	96	0	0	2010	4	96	0	0	
	Hungary	1980	29	71	0	0	2005	20	74	0	6	
	Latvia	1990	79	21	0	0	2008	17	83	0	0	
	Lithuania	.	.	.	.	.	.	.	.	.	.	
	Poland <sup>g</sup>	2000	16	55	29	0	2007	12	63	24	1	
	Romania <sup>h</sup>	2004	3	95	0	2	2008	3	96	0	1	
	Slovak Republic	1991	28	49	22	1	2008	3	92	4	1	
Slovenia	.	.	.	.	.	.	.	.	.	.		

- a Annual average; principal dwellings.
- b Occupied dwellings.
- c Refers to stock statistics.
- d Excluding Ex-GDR.
- e Co-operative dwellings: Housing co-operatives based on tenant-ownership. A small fraction (<1% of total dwelling stock) consists of co-operative rental dwellings.
- f 1982: Households, 2001: Conventional dwellings.
- g Co-operative dwellings refer to dwellings with ownership titles. No precise estimation available on how many owner-occupied dwellings are in fact rented (black economy). Estimation by housing ministry and statistical offices is that about 5% of owner-occupied stock is illegally rented.
- h Other includes dwellings with tenure status "gratuities" (without paying rent).

Source: Dol and Haffner (2010)

Table A5.2 Long-term changes in tenure, households (in average annual changes; in percentages)

		rent	owner-occupied	cooperative	other
Western Europe	Austria	-0.2	0.3	.	-0.8
	Belgium	-0.7	0.5	.	-100.0
	France	-0.2	0.7	.	-3.8
	Germany	-0.4	0.6	.	.
	Ireland	-0.6	0.2	.	.
	Luxembourg	-1.1	0.6	.	0.0
	Netherlands	-1.1	1.1	.	.
	Switzerland	.	.	.	.
	United Kingdom	-1.3	0.8	.	.
Northern Europe	Denmark	-0.3	-0.6	6.9	6.9
	Finland	0.1	0.2	.	-3.0
	Norway	.	.	.	.
	Sweden	0.2	-0.4	0.4	.
Southern Europe	Cyprus	-0.7	0.6	.	-1.3
	Greece	-1.3	0.2	.	3.1
	Italy	-2.3	0.6	.	3.5
	Malta	0.0	0.3	.	-5.6
	Portugal	-3.0	1.8	.	-1.1
	Spain	-1.8	0.6	.	-4.0
Central and Eastern Europe	Bulgaria	.	.	.	.
	Croatia	.	.	.	.
	Czech Republic	-1.5	0.8	1.3	0.0
	Estonia	0.0	0.0	.	.
	Hungary	-1.5	0.2	.	.
	Latvia	-8.2	7.9	.	.
	Lithuania	.	.	.	.
	Poland	-4.0	2.0	-2.7	.

Romania	0.0	0.3	.	-15.9
Slovak Republic	-12.3	3.8	-9.5	0.0
Slovenia				

Notes: see Table 5B.1.

Source: Dol and Haffner (2010) SCP/OTB treatment

Table A5.3 Tenure structure<sup>a,b</sup>, households, 2007 and 2012 and change in rate of homeownership (in percentages)

		Outright owner	Owner paying mortgage	Rent	Provid ed free	Change in ownership rate (%) between 2007 and 2012
Western Europe	Austria 2007	31	21	41	7	
	Austria 2012	29	20	42	8	-11
	Belgium 2007	38	30	31	2	
	Belgium 2012	34	33	31	2	-1
	France 2007	37	20	40	4	
	France 2012	39	22	36	4	15
	Germany 2007	0	46 <sup>1</sup>	51	3	
	Germany 2012	25	20	52	3	-2
	Luxembourg 2007	35	36	26	3	
	Luxembourg 2012	33	35	30	2	-8
	Netherlands 2007	9	47	43	0	
	Netherlands 2012	8	48	43	0	-9
	Switzerland 2007					
	Switzerland 2012	5	35	58	2	Missing
	Ireland 2007	50	28	21	1	
	Ireland 2012	41	28	28	2	-18
UK 2007	31	40	28	1		
UK 2012	33	32	34	1	-14	
Northern Europe	Denmark 2007	16	41	42	0	
	Denmark 2012	14	41	45	0	-13
	Finland 2007	35	32	32	1	
	Finland 2012	36	32	31	1	3
	Norway 2007	25	52	19	3	
	Norway 2012	24	54	19	2	0
	Sweden 2007	16	46	38	0	
	Sweden 2012	11	52	36	0	-18
Southern Europe	Cyprus 2007	50	17	14	20	
	Cyprus 2012	50	15	16	19	-12

	Greece 2007						
	Greece 2012	61	12	22	5	Missing	
	Italy 2007	60	12	19	10		
	Italy 2012	60	13	18	9	8	
	Malta 2007						
	Malta 2012	63	16	17	4	Missing	
	Portugal 2007	51	21	19	9		
	Portugal 2012	44	29	19	8	24	
	Spain 2007	52	31	11	6		
	Spain 2012	51	28	15	6	-12	
Central and Eastern Europe	Bulgaria 2007	84	2	5	8		
	Bulgaria 2012	85	2	3	10	1	
	Croatia 2007						
	Croatia 2012	88	2	3	7	Missing	
	Czech Republic 2007	63	9	24	4		
	Czech Republic 2012	64	14	18	3	57	
	Estonia 2007	71	12	7	10		
	Estonia 2012	65	13	7	14	0	
	Hungary 2007	75	12	6	6		
	Hungary 2012	72	17	7	4	38	
	Latvia 2007	81	2	13	3		
	Latvia 2012	72	8	14	6	289	
	Lithuania 2007	84	5	3	7		
	Lithuania 2012	87	5	3	5	4	
	Poland 2007	55	3	4	38		
	Poland 2012	72	8	6	13	198	
	Romania 2007	95	0	2	2		
	Romania 2012	96	1	2	2	2	
	Slovak Republic 2007	85	4	9	1		
	Slovak Republic 2012	82	8	8	1	96	
	Slovenia 2007	77	4	8	12	0	
	Total	2007	38	27	29	6	
		2012	44	22	29	5	-3

a In the EU-SILC'07, data were available for the total share of homeowners, while in the EU-SILC'12, the distinction between homeowner types is possible.

b Other tenure is not shown for Norway, Sweden and Hungary in 2007 (1 each). Other tenure is not shown for Norway in 2012 (2) and Sweden 2012 (1). Within the rental sector social and private renting cannot be distinguished in the EU-SILC database. The total is not weighted. The table is the basis for Figure 5.1.

Sources: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012.

Table A5.4 Tenure structure<sup>a</sup>, lower-income households, 2012 (in percentages)

		<b>outright owner</b>	<b>owner paying mortgage</b>	<b>rent</b>	<b>provided free</b>
Western Europe	Austria	23	17	26	4
	Belgium	23	30	16	1
	France	30	19	20	2
	Germany	20	18	31	2
	Ireland	29	24	16	1
	Luxembourg	27	27	15	2
	Netherlands	6	42	22	0
	Switzerland	3	27	39	0
	United Kingdom	23	26	20	1
Northern Europe	Denmark	9	35	26	0
	Finland	25	29	16	0
	Norway	17	45	7	1
	Sweden	7	44	18	0
Southern Europe	Cyprus	38	13	9	9
	Greece	43	10	14	3
	Italy	43	11	11	5
	Malta	44	13	10	2
	Portugal	29	25	12	5
Central and Eastern Europe	Spain	36	23	8	3
	Bulgaria	60	1	3	6
	Croatia	61	2	2	5
	Czech Republic	45	12	11	2
	Estonia	44	12	5	8
	Hungary	51	13	4	3
	Latvia	51	7	8	4
	Lithuania	61	4	2	3
	Poland	51	7	4	8
	Romania	67	1	1	1
	Slovak Republic	57	7	5	1
Slovenia	50	6	4	10	
<b>Total</b>	<b>Total</b>	<b>31</b>	<b>19</b>	<b>17</b>	<b>3</b>

a Other tenure is excluded. Within the rental sector social and private renting cannot be distinguished in the EU-SILC database. The total is not weighted.

Sources: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012



## A5.2 Outcomes

Table A5.5 Indicators of housing problems by European cluster, households, 2012 (in percentages)

indicator/problem	Central and Eastern	Northern	Southern	Western	all
quality problem (at least one)	65	53	65	58	61
no bath or no toilet	13	1	1	1	3
too dark / not enough light	6	5	7	6	6
leaking roof, damp walls/floors/foundation, or rot in window frames or floor	14	9	17	14	14
noise from neighbours or from the street	17	15	17	22	20
inadequate electric installations	4	5	6	7	6
inadequate plumbing/ water installations	11	6	8	6	7
no heating facilities present	1	0	5	0	1
not comfortably warm during winter time	16	10	19	8	12
not comfortably cool during summer time	25	14	26	13	18
grocery services accessible with great difficulty	2	1	4	1	2
banking services accessible with great difficulty	8	1	4	2	3
postal services accessible with great difficulty	5	2	4	3	3
public transport accessible with great difficulty	4	7	5	4	5
primary health care services accessible with great difficulty	5	2	5	2	3
compulsory school accessible with great difficulty	1	0	2	0	1
not able to keep dwelling warm	16	2	17	6	10
pollution, grime or other environmental problems	14	8	13	15	14
crime violence or vandalism in the area	11	9	13	16	14
sufficient space problem (at least one)	35	17	19	15	19
overcrowded (Eurostat definition)	32	9	11	6	12
shortage of space (subjective)	15	11	11	11	12
affordability problem (at least one)	10	6	12	7	8
arrears on mortgage or rent payments	2	4	5	3	3
housing expenses at risk of being unaffordable (authors' definition)	8	3	8	4	5
housing problem	75	56	71	61	65
quality problem	64	49	64	56	59
sufficient space problem	35	17	19	15	19
affordability problem	10	6	12	7	8
no housing problem	25	44	29	39	35

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

Table A5.6 Housing composite outcome indicator by dimensions, households, 2012 (in percentages)

	<b>composite outcome</b>	<b>indicator quality</b>	<b>indicator sufficient space</b>	<b>indicator affordability</b>
Austria	40	49	78	91
Belgium	39	43	90	91
France	34	38	86	92
Germany	42	47	84	95
Ireland	44	53	89	86
Luxembourg	43	49	83	96
Netherlands	36	39	87	93
United Kingdom	42	47	86	93
Denmark	41	47	84	94
Finland	38	44	84	94
Norway	45	51	85	93
Sweden	48	57	81	94
Cyprus	24	30	85	85
Italy	25	32	78	88
Portugal	17	21	82	87
Spain	38	46	86	89
Bulgaria	12	21	62	82
Czech Republic	37	46	81	92
Estonia	29	34	83	93
Hungary	27	40	61	86
Latvia	13	21	64	83
Lithuania	21	25	78	91
Poland	29	44	63	92
Romania	13	22	57	90
Slovak Republic	31	46	67	91
Slovenia	29	37	74	90

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

### A5.2.1 Composite housing outcome indicator

Table A5.7 Satisfaction with the dwelling and composite outcome indicator, households, 2012 (in percentages and index)

<b>country</b>	<b>share of households satisfied with the dwelling</b>	<b>housing outcome index</b>
Austria	91	0.74
Belgium	93	0.69
France	93	0.16
Germany	88	0.90
Ireland	90	1.18
Luxembourg	92	1.05
Netherlands	96	0.34
United Kingdom	95	0.91
Denmark	75	0.88
Finland	93	0.58
Norway	97	1.21
Sweden	94	1.50
Cyprus	92	-0.78
Italy	89	-0.68
Portugal	90	-1.41
Spain	88	0.60
Bulgaria	85	-1.85
Czech Republic	87	0.49
Estonia	82	-0.28
Hungary	82	-0.51
Latvia	86	-1.78
Lithuania	85	-1.07
Poland	84	-0.27
Romania	90	-1.75
Slovak Republic	91	-0.13
Slovenia	95	-0.29

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

### A5.2.2 Outcomes for households with a lower income are not very different

Table A5.8 Housing composite outcome indicator based on common information in 2007 and 2012 by dimensions, lower-income households, 2012 (in percentages)

<b>country</b>	<b>all households</b>	<b>lower-income households</b>
Austria	40	25
Belgium	39	24
France	34	22
Germany	42	27
Ireland	44	30
Luxembourg	43	28
Netherlands	36	23
United Kingdom	42	32
Denmark	41	28
Finland	38	28
Norway	45	33
Sweden	48	34
Cyprus	24	12
Italy	25	13
Portugal	17	9
Spain	38	24
Bulgaria	12	3
Czech Republic	37	27
Estonia	29	20
Hungary	27	12
Latvia	13	5
Lithuania	21	11
Poland	29	18
Romania	13	4
Slovak Republic	31	23
Slovenia	29	16

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

### A5.2.3 The three dimensions of the composite outcome indicator

Table A5.9 Housing composite outcome indicator by dimensions, households, 2007 (in percentages)

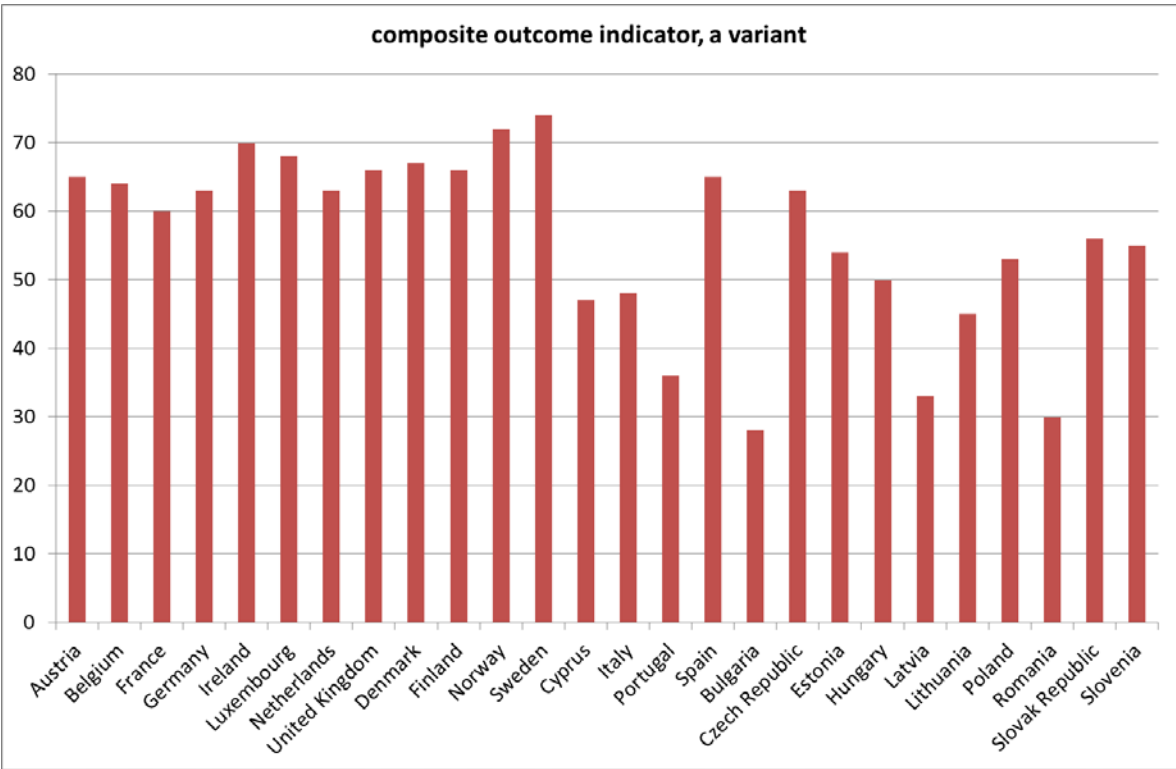
<b>country</b>	<b>composite outcome indicator</b>	<b>indicator quality</b>	<b>indicator sufficient space</b>	<b>indicator affordability</b>
Austria	41	51	78	95
Belgium	34	37	89	92
France	28	32	82	92
Germany	37	40	88	95
Ireland	42	51	81	90
Luxembourg	40	45	86	96
Netherlands	32	36	86	92
United Kingdom	34	38	86	93
Denmark	39	46	83	95
Finland	37	44	79	93
Norway	50	58	85	92
Sweden	45	55	80	94
Cyprus	16	20	78	81
Italy	22	28	77	85
Portugal	10	13	78	82
Spain	27	33	83	88
Bulgaria	6	12	58	66
Czech Republic	25	33	70	89
Estonia	16	24	61	95
Hungary	22	35	61	84
Latvia	6	15	42	82
Lithuania	14	21	57	94
Poland	15	24	58	79
Romania	8	15	55	77
Slovak Republic	21	34	62	87
Slovenia	26	38	64	92

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

**A5.2.4 Discussion on outcome measure**

Palvarani and Pavolini (2010) in particular stress the importance of the prevalence of separate problems. The absence of a toilet, for example, may affect a household more in a Western country where toilets are common than in Eastern countries where one in eight households lack a toilet. This line of argument is not pursued further, but it will be clear that the Eastern European countries will score higher on the quality indicator than on the indicator where countries are ranked according to the share of households without problems. Another point concerns the number of problems in the output variables that define the household as having ‘a housing problem’. In the main text, we define ‘at least one problem’ as being enough. Here we look at the effect of changing the threshold to ‘at least two problems’ (Figure 5B.1). The effects are quite limited.

Figure A5.1 Variant on the composite outcome indicator: outcome scores with households with more than one (instead of one or more) housing problems taken to be problematic, households, 2012 (in percentages)

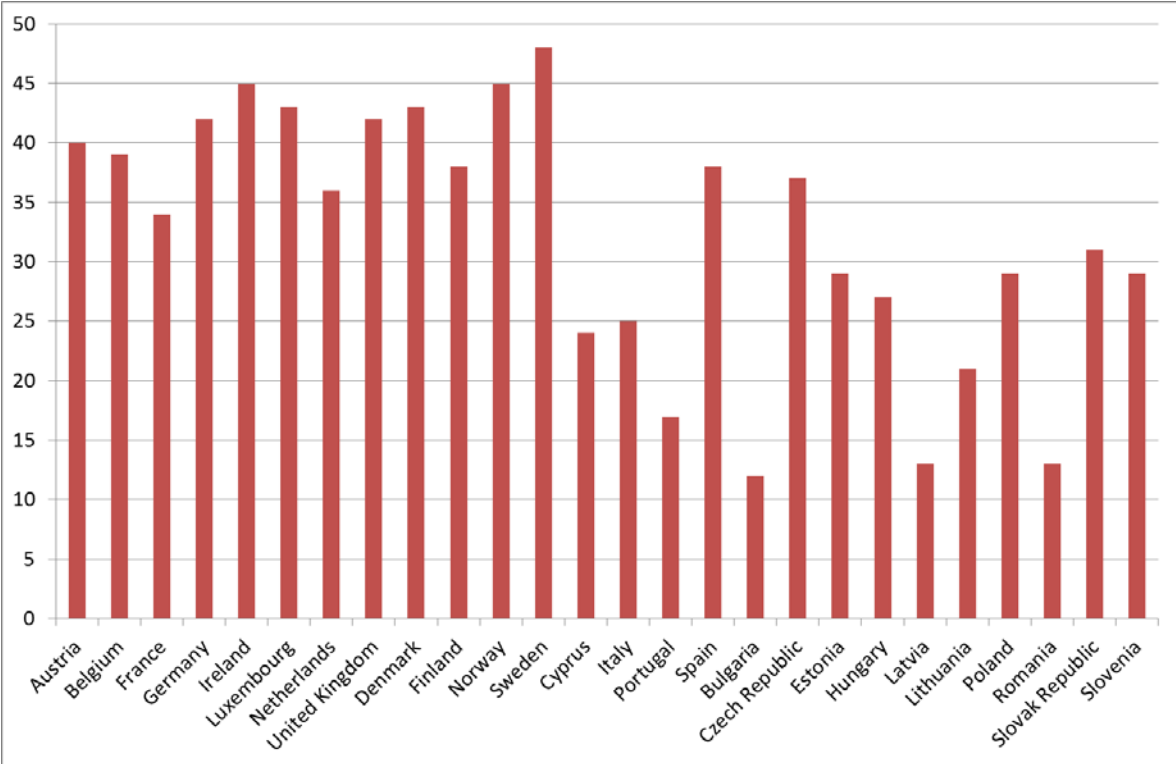


Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012.

Housing expenses (rent and mortgage interest payments) may be at risk of being unaffordable, given the relationship between income and cost. Several definitions of housing costs of home owners exist. Some are economically motivated, such as user cost, including the opportunity cost of alternative investment of capital and excluding principal repayments (a saving rather than a cost). Others are expenditure based, focusing on the amount households have to pay (to the bank) each month. In the combined 2007/2012 EU-SILC, only data on mortgage interest payments are available in both years.

The prevalence is 6 on average, ranging from 3-4 (Northern/Western Europe) to 8-9 (rest of Europe). These ratios exclude mortgage principal repayments and housing- related costs such as energy and water. As a sensitivity analysis, we looked at the effect of including mortgage repayments in the at-risk-of-unaffordability problem. A priori, limited effects are expected, because this is just one of the output indicators. Furthermore, housing costs increase when repayments are included, but so do the ‘expected costs’ that we deduct from the ‘minimal income’ to compute the minimal residual income.

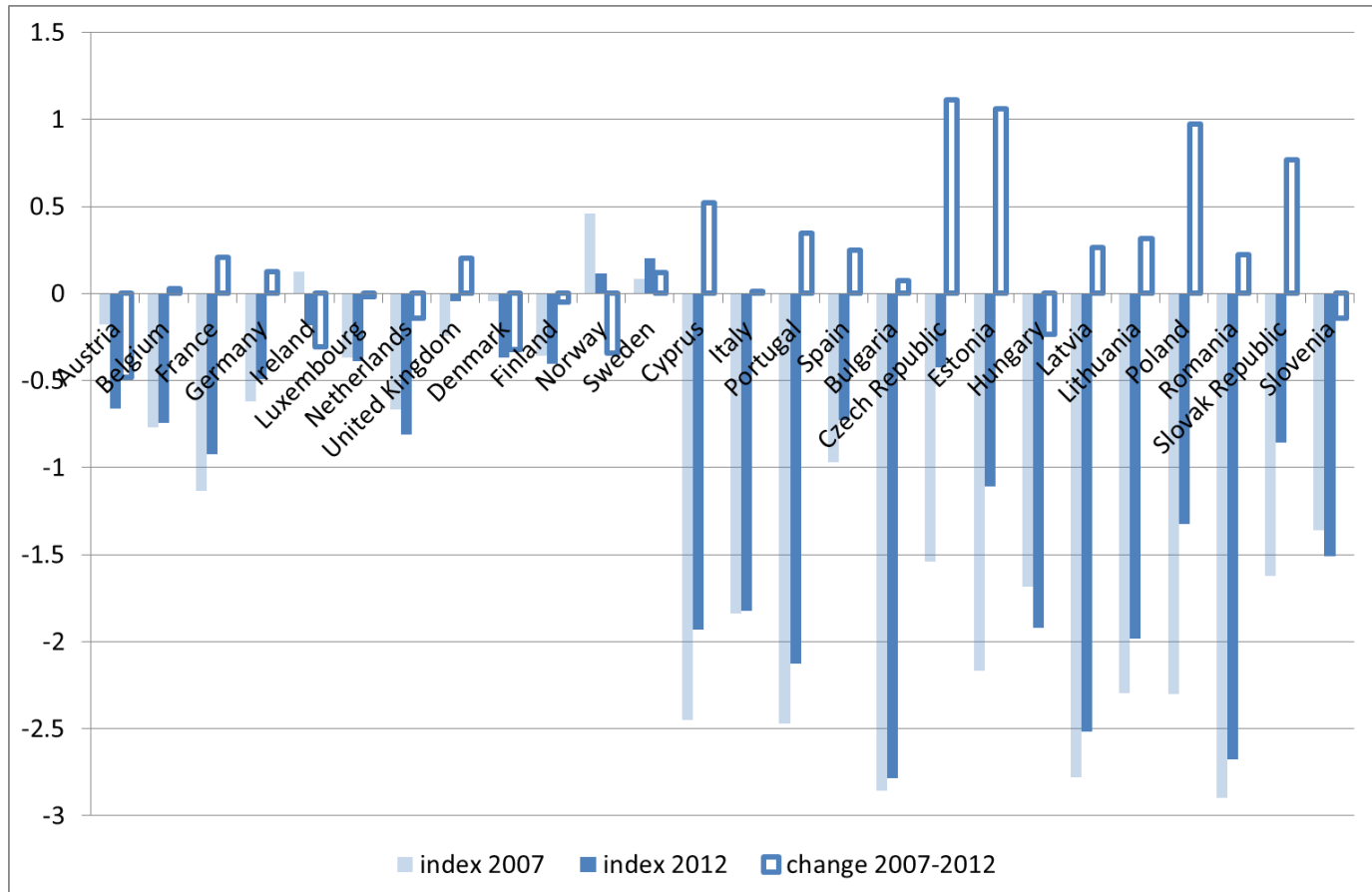
Figure A5.2 Variant on the composite outcome indicator: outcome scores with affordability computed on the basis of housing costs including mortgage repayments, households, 2012 (in percentages)



Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

### A5.2.5 Housing problems over time

Figure A5.3 Composite outcome indicator over time, lower-income households, 2007 and change 2007-2012 (index)



Source: EU-SILC'07/'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012



Table A5.10 Composite outcome indicator over time, all and lower-income households, 2007 and change 2007-2012 (in percentages)

	<b>all households</b>		<b>lower-income households</b>	
	composite outcome 2007	change 2007-2012	composite outcome 2007	change 2007-2012
Austria	41	-1	29	-4
Belgium	34	5	23	1
France	28	6	20	2
Germany	37	5	25	2
Ireland	42	2	31	-1
Luxembourg	40	3	28	0
Netherlands	32	4	25	-2
United Kingdom	34	8	29	3
Denmark	39	2	31	-3
Finland	37	1	28	0
Norway	50	-5	36	-3
Sweden	45	3	33	1
Cyprus	16	8	4	8
Italy	22	3	10	3
Portugal	10	7	4	5
Spain	27	11	18	6
Bulgaria	6	6	0	3
Czech Republic	25	12	15	12
Estonia	16	13	9	11
Hungary	22	5	11	1
Latvia	6	7	2	3
Lithuania	14	7	7	4
Poland	15	14	4	14
Romania	8	5	1	3
Slovak Republic	21	10	13	10
Slovenia	26	3	16	0

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

### A5.3.1 Inputs

#### Government expenditure on housing

As housing outcomes are probably also influenced by past government expenditure – new construction takes a long time and dwellings have a long life – the aim would be to take into account the average expenditure over as long a period as possible. The longest period that could be taken into account for our calculations was a ten-year period. It turns out that during periods of one, five and ten years there is strong correlation between average government expenditures. As the number of countries without observations increases a great deal when using the ten-year period, it was decided to use the five-year period as shown in Table 5B.11. The last year in each period corresponds with the year of measurement of household income in the EU-SILC databases. It can be seen that the five-year average total government expenditure on housing is between 0.5 and 3.0 of GDP per year (2007-2011; 1.4 to 2.9 in the earlier period).

Table A5.11 General government expenditure (average per year) on housing by COFOG, 2002-2006 and 2007-2011 ( of GDP)

	housing as part of social protection (COFOG 10.6) <sup>a</sup>	housing and community amenities (COFOG 6.0) <sup>b</sup>	total government expenditure on housing	housing as part of social protection (COFOG 10.6) <sup>a</sup>	housing and community amenities (COFOG 6.0) <sup>b</sup>	total government expenditure on housing	difference in total
	2002-2006 average per year	2002-2006 average per year	2002-2006 average per year	2007-2011 average per year	2007-2011 average per year	2007-2011 average per year	
<b>Western Europe</b>							
Austria	0.1	0.6	0.7	0.1	0.6	0.7	-2
Belgium	.	0.4	.	.	0.4	.	.
France	0.9	2.0	2.9	1.0	2.0	3.0	16
Germany	0.2	1.1	1.2	0.1	0.7	0.7	-48
Ireland	0.6	1.4	2.0	0.7	1.6	2.3	28
Luxembourg	0.0	0.8	0.8	0.0	0.8	0.8	-2
Netherlands	0.3	0.6	0.9	0.4	0.6	1.0	10
Switzerland	.	.	.	.	0.2	.	.
United kingdom	1.1	1.0	2.1	1.3	1.1	2.5	34
<b>Northern Europe</b>							
Denmark	0.7	0.6	1.3	0.7	0.5	1.2	-14
Finland	0.3	0.3	0.6	0.3	0.4	3.0	240
Norway	0.2	0.6	0.8	0.1	0.7	0.8	-4
Sweden	0.5	0.8	1.3	0.3	0.8	1.1	-26
<b>Southern Europe</b>							
Cyprus	0.1	2.4	2.5	0.0	2.8	2.8	36
Greece	0.2	0.4	0.5	0.3	0.3	0.6	4
Italy	0.0	0.6	0.6	0.0	0.7	0.7	14
Malta	0.2	0.8	1.0	0.2	0.4	0.7	-36
Portugal	0.0	0.7	0.7	0.0	0.7	0.7	-4

Spain	0.1	0.9	1.0	0.1	0.9	1.0	0
Central and eastern Europe							
Bulgaria	.	0.6	.	0.1	1.3	1.4	.
Croatia	.	.	.	.	.	.	.
Czech Republic	0.2	1.3	1.5	0.1	1.0	1.1	-40
Estonia	0.1	0.3	0.4	0.0	0.5	0.5	12
Hungary	0.9	0.9	1.8	0.7	1.0	1.7	-14
Latvia	.	1.4	.	0.1	1.3	1.4	.
Lithuania	0.2	0.3	0.5	0.1	0.4	0.5	-6
Poland	0.1	1.5	1.6	0.1	1.1	1.2	-40
Romania	.	1.8	.	.	1.4	.	.
Slovakia	.	0.9	.	.	0.8	.	.
Slovenia	0.0	0.6	0.6	0.0	0.7	0.7	18

a Includes means-tested support to households plus administration costs of support systems.

b Includes government expenditure on housing and community development (including R&D), water supply and street lighting.

. = not available

Source: Eurostat (COFOG, 2002-2011)

## A5.4 Explaining differences in outcomes

Table A5.12 Composite outcome indicator by average equivalised disposable household income, all households and lower-income households, 2012 (in euros and percentages)

country	all households		lower-income households	
	equivalised income	housing outcome index (%)	equivalised income	housing outcome index (%)
Austria	24800	0.74	11800	-0.66
Belgium	21300	0.69	10900	-0.74
France	24600	0.16	12100	-0.93
Germany	21400	0.90	10000	-0.49
Ireland	22000	1.18	10200	-0.18
Luxembourg	38400	1.05	19100	-0.39
Netherlands	22600	0.34	12300	-0.81
United Kingdom	22600	0.91	9800	-0.05
Denmark	27100	0.88	12600	-0.37
Finland	24100	0.58	12400	-0.41
Norway	41100	1.21	22500	0.12
Sweden	25200	1.50	12700	0.20
Cyprus	21200	-0.78	9200	-1.93
Italy	18700	-0.68	8000	-1.83
Portugal	10600	-1.41	4500	-2.13
Spain	14400	0.60	5400	-0.73
Bulgaria	3200	-1.85	1300	-2.78
Czech Republic	8600	0.49	4900	-0.43
Estonia	7000	-0.28	2900	-1.11
Hungary	5300	-0.51	2900	-1.92
Latvia	5300	-1.78	2100	-2.52
Lithuania	4900	-1.07	2100	-1.98
Poland	6200	-0.27	2800	-1.33
Romania	2500	-1.75	1000	-2.68
Slovak Republic	7400	-0.13	4000	-0.86
Slovenia	12700	-0.29	6600	-1.51

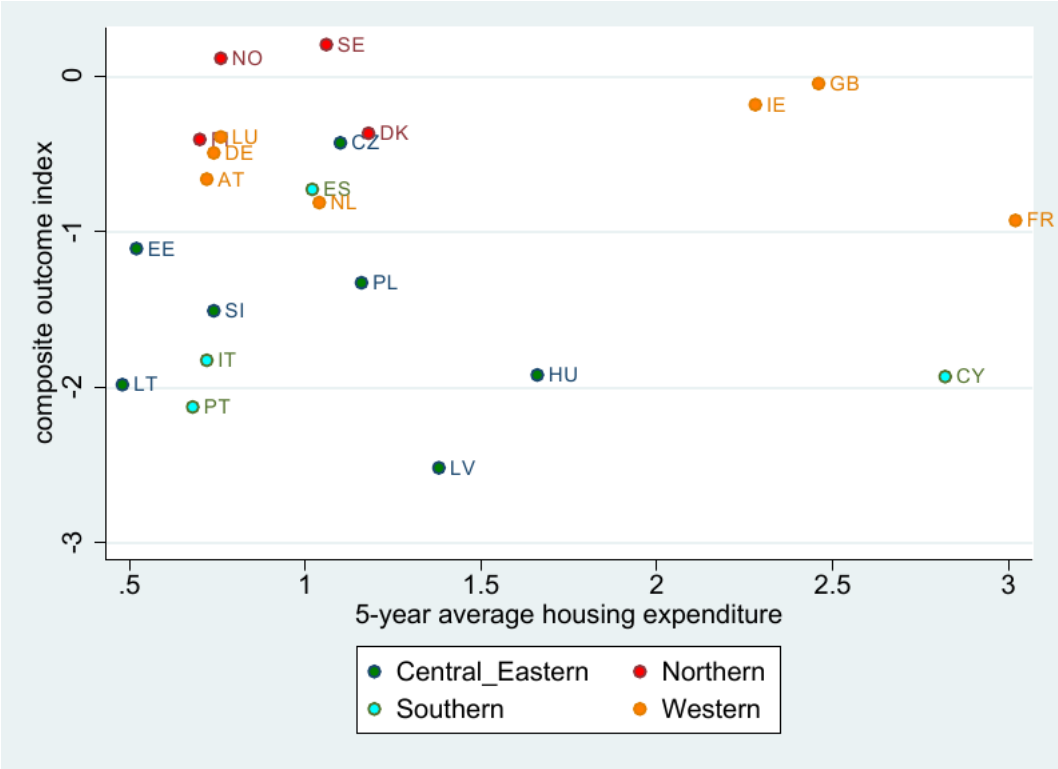
Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

Table A5.13 Outcomes by dimension, tenure and geographical cluster, households, 2012 (in percentages)

		<b>outcome</b>	<b>outcome quality</b>	<b>outcome sufficient space</b>	<b>outcome affordability</b>
outright owner	Central and Eastern Europe	25	36	67	92
outright owner	Northern Europe	53	56	93	98
outright owner	Southern Europe	32	37	86	94
outright owner	Western Europe	52	54	95	99
outright owner	all	37	43	85	95
owner paying mortgage	Central and Eastern Europe	33	48	65	89
owner paying mortgage	Northern Europe	53	58	89	96
owner paying mortgage	Southern Europe	33	42	80	88
owner paying mortgage	Western Europe	46	51	90	96
owner paying mortgage	all	42	49	85	93
rent	Central and Eastern Europe	12	28	42	68
rent	Northern Europe	27	39	70	88
rent	Southern Europe	16	27	68	69
rent	Western Europe	26	33	76	88
rent	all	24	32	73	84

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012

Figure A5.4 Government expenditure on housing (average percentage over five-year period 2006-2011) versus composite outcome indicator, lower-income households, 2012 (in percentages of GDP and index)



**A5.5 EU-SILC: Imputations and two specific indicators**

In the 2007 data, we imputed ‘Dwelling comfortably cool during summer time’ for unknown responses in Bulgaria and Romania, ‘Dwelling comfortably warm during winter’ for Ireland, ‘Adequate plumbing/water installation’ for four Central and Eastern European countries and Portugal. In the 2012 data, we imputed ‘Adequate plumbing/water installation’ for Norway, Latvia and Lithuania.

The extent to which dwellings are overcrowded was calculated according to Eurostat’s definitions, based on the number of rooms, household size and the presence of young household members.

For affordability, we used an alternative definition. Contrary to the widely used (over 30) share of housing costs in disposable income, our measure associates cost problems with income being very low after having paid for housing. Households with comfortable incomes that can easily afford (and may have chosen to have) high costs are not regarded as problematic here. Our measure does, however, introduce another more or less arbitrary decision: what level of ‘income after housing costs’ (also referred to as residual income) should be an indicator of ‘at risk of unaffordability’? Referring to poverty line definitions does have drawbacks in an eu- 28 perspective: the popular ‘60 of the median’ neglects the huge income differences between countries, and applying a standard budget method to all countries is simply too elaborate for this project. Applying the Dutch standard to all countries, by using purchasing power parities, yields very high at- risk- of- unaffordability levels for a number of Central and Eastern European countries. It was decided to use EU-SILC information on the self-reported ‘Ability to make ends meet’. Out of the six response categories, the group reporting ‘with great difficulty’ was seen as the relevant at-risk- of-poverty group. This item concerns income before housing costs. To convert the response category to an objectively distinguishable group, a line was set such that the size of the group ‘with great difficulty’ was preserved. The last step in the reasoning is that the feeling of difficulty in

making ends meet with a certain income must be related to a level of (equivalised) housing costs that people in that income group are used to, or in other words: average housing costs of that group. This average was computed for each country for this lower-income group and subtracted from the income benchmark 'before housing' to calculate the unaffordability benchmark 'after housing'.

## Appendix Chapter 6 Social security

### A6.1 Long-term unemployment

Table A6.1 Long-term unemployment (persons unemployed persons for 12 months or more as % of total number of unemployed persons)

	2005	2010	2013
<b>Western Europe</b>			
Austria	25.3	25.2	24.3
Luxembourg	26.4	29.3	30.4
United Kingdom	21.1	32.7	36.2
Germany	53.0	47.3	44.7
Netherlands	40.2	27.6	36.1
Belgium	51.7	48.8	46.1
France	41.1	40.2	40.4
Ireland	33.4	49.1	60.6
Switzerland	36.4	31.3	30.8
<b>Northern Europe</b>			
Norway	18.7	20.6	20.9
Sweden	13.1	18.6	18.5
Finland	25.8	24.0	20.7
Denmark	23.4	20.2	25.5
<b>Southern Europe</b>			
Malta	48.6	44.9	45.7
Cyprus	23.5	20.4	38.3
Italy	49.9	48.5	56.9
Portugal	48.3	52.2	56.4
Spain	24.4	36.6	49.7
Greece	51.9	44.6	67.1
<b>Central and Eastern Europe</b>			
Czech Republic	53.0	40.9	43.4
Romania	56.3	34.9	46.4
Estonia	54.2	45.3	44.5
Poland	57.7	31.1	42.5
Hungary	45.0	49.3	48.6
Lithuania	52.8	41.7	42.9
Slovenia	47.3	43.3	51.0
Latvia	44.6	45.0	48.6
Bulgaria	59.8	46.4	57.3
Slovak Republic	71.9	64.0	70.2
Croatia	58.4	56.9	63.6
<b>Oceania</b>			
Australia	18.3	18.5	20.3 <sup>a</sup>
New Zealand	8.3	8.2	11.8 <sup>a</sup>
<b>Northern America</b>			
United States	11.8	29.0	25.9
Canada	9.2	11.5	11.9 <sup>a</sup>
<b>Eastern Asia</b>			
Japan	33.3	37.6	41.2
Korea	0.8	0.3	0.3 <sup>a</sup>

a 2012.

Source: Eurostat (Long-term unemployment 2015); World Bank (Long-term unemployment 2015)



## A6.2 Government expenditure: how is it defined?

To obtain a picture of government expenditure, we use data from Eurostat for the European countries (Eurostat 2011). In this database, total government expenditure is classified by functions, according to the Classification of the Functions of Government (COFOG). One of the ten defined functions is 'social protection', which in turn is subdivided into (1) sickness and disability, (2) old age, (3) family and children, (4) survivors, (5) unemployment, (6) housing, (7) social exclusion n.e.c. (8) R&D social protection, and (9) social protection n.e.c. Furthermore, the expenditure is characterised as a particular set of transactions undertaken by units in the government sector as defined and recorded in national accounts under the European System of Accounts 1995 (ESA95). This system describes the government sector as "all institutional units which are other non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth".

The institutional units that make up the government sector are:

- a) General government entities (excluding public producers organised as public corporations or, by virtue of special legislation, recognised as independent legal entities, or quasi-corporations, when any of these are classified in the non-financial and financial sectors) which administer and finance a group of activities, principally providing non-market goods and services, intended for the benefit of the community;
- b) Non-profit institutions recognised as independent legal entities which are other non-market producers and which are controlled and mainly financed by general government;
- c) Autonomous pension funds which fulfil each of the following criteria:
  - by law or by regulation certain groups of the population are obliged to participate in a scheme or to pay contributions,
  - general government is responsible for the management of the institution in respect of the settlement or approval of the contributions and benefits, independently of its role as supervisory body or employer.

COFOG distinguishes outlays by four subsectors of government: central government, state government, local government and social security funds.

For the non-European countries we use data collected by the OECD for its Social Expenditure Database (SOCX). The expenditure in this database is not strictly tied to government outlays (Adema et al. 2011). It defines social expenditure as: "the provision by public and private institutions of benefits to, and financial contributions targeted at, households and individuals in order to provide support during circumstances which adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer. (pp. 90)" SOCX contains data on nine policy areas (old age, survivors, incapacity-related, health, family, active labour market policies, unemployment, housing and other social policy areas). The distinction between public and private expenditure is made on the basis of who controls the financial flows: public institutions or private bodies. According to the OECD, expenditure is public when the financial flows are controlled by the government (central government, state government, local government and/or social security funds). To give an example, sickness benefits financed by compulsory employer and employee contributions to social insurance funds are considered public. However, pensions paid to former civil servants through autonomous funds are private expenditure (as is the case in Australia, Canada, Denmark, the Netherlands, Sweden and the United Kingdom). Thus the benefits that are not provided by the government are considered 'private' in SOCX. Private social expenditure can be divided

into (1) mandatory private outlays and (2) voluntary private expenditure. Expenditure prescribed by legislation but operated through the private sector is mandatory private expenditure, for example the legal obligation on employers to pay direct sick leave payments to employees. Privately operated programmes involving the redistribution of resources across households or collective (often employment-related) support arrangements, such as pensions and childcare support, are forms of voluntary private expenditure. However, a private pension insurance with actuarially fair contributions that involves no redistribution across households is not considered as voluntary private expenditure since it is not considered to have a social function, but is exclusively private.

### A6.3 Unemployment benefits

**Table A6.2 Unemployment benefit programme**

#### **Western Europe**

Austria	Social insurance and social assistance
Belgium	Social insurance and social assistance
France	Social insurance and social assistance
Germany	Social insurance and social assistance
Ireland	Social insurance and social assistance
Luxembourg	Social insurance
Netherlands	Social insurance and social assistance
Switzerland	Mandatory insurance
United Kingdom	Social insurance and social assistance

#### **Northern Europe**

Denmark	Subsidized voluntary insurance and social assistance
Finland	Subsidized voluntary insurance and social assistance
Norway	Universal and social insurance
Sweden	Subsidized voluntary insurance and social assistance

#### **Southern Europe**

Cyprus	Social insurance
Greece	Social insurance and social assistance
Italy	Social insurance
Malta	Social insurance and social assistance
Portugal	Social insurance and social assistance
Spain	Social insurance and social assistance

#### **Central and Eastern Europe**

Bulgaria	Social insurance
Croatia	Social insurance and social assistance
Czech Republic	Social insurance
Estonia	Social insurance and social assistance
Hungary	Social insurance and social assistance
Latvia	Social insurance
Lithuania	Social insurance
Poland	Social insurance
Romania	Social insurance
Slovak Republic	Social insurance
Slovenia	Social insurance

#### **Oceania**

Australia	Social assistance
New Zealand	Social assistance

#### **Northern America**

Canada	Social insurance
United States	Social insurance

**Eastern Asia**

Japan	Social insurance
Korea	Social insurance

Source: ILO

**References**

Adema, W., P. Fron and M. Ladaïque (2011). *Is the European Welfare State Really More Expensive? Indicators on Social Spending, 1980-2012, and a Manual to the OECD Social Expenditure Database (SOCX)*. OECD Social, Employment and Migration Working Papers, No. 124, OECD Publishing.

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