

Work Disability and Health over the Life Course

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- ▶ **Disability insurance** – DI: the insurance against the loss of the ability to work – is a substantial part of social security expenditures in most countries.

- ▶ Typically for any social security system, DI faces **trade-off**:

- ▶ **Essential part of social safety net:**

prevent income losses if no ability to work

- ▶ **Early retirement route:**

even if ability to work not affected

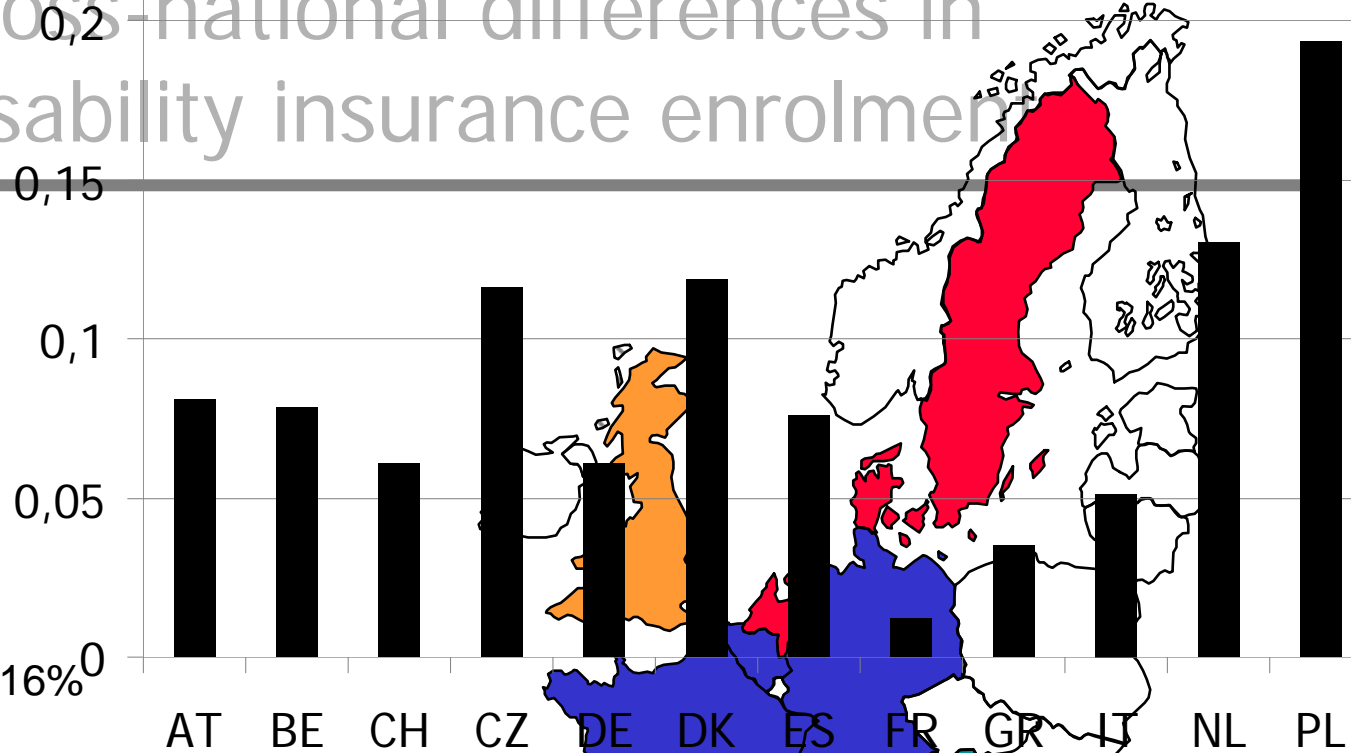
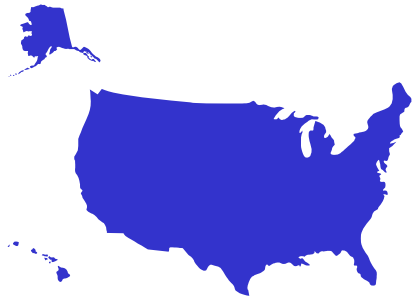
- ▶ **Benefit recipiency rates** in DI vary strikingly across countries

- ▶ Paper investigates the extent of, and the **causes** for, this cross-national variation:
1. Demographics, 2. Health (cross-section/life-course), 3. Institutions
in order to better understand the above trade-off

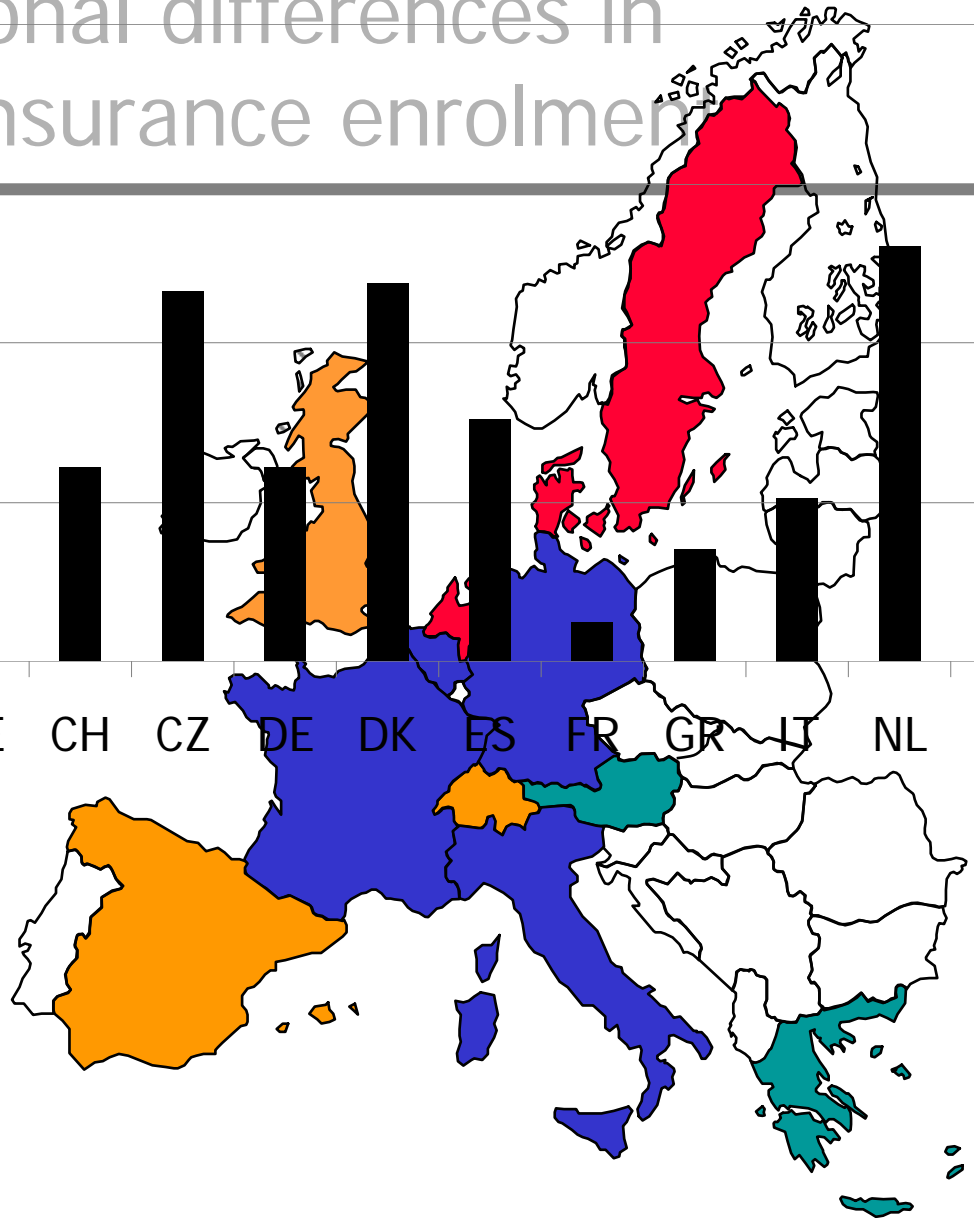
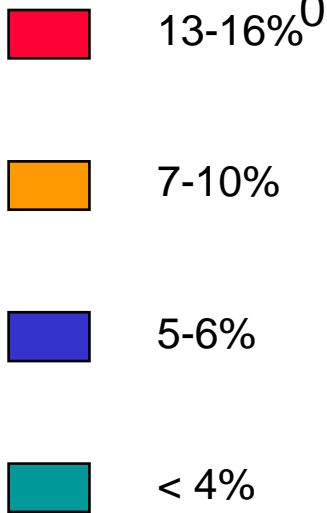
- ▶ Uses data merged from **SHARE 2004/06, SHARE_LIFE, ELSA** and **HRS 2004**



Cross-national differences in disability insurance enrolment



Disability insurance enrolment (age 50-65)



- **Regression**
 - DI benefit recipiency rate on demographics, health measures, measures of generosity of DI and life course characteristics
- **Variance Decomposition**
 - total/within country/cross-country
- **Counterfactual Simulation**
 - Equalizing cross-national differences in demographics, health, welfare state and life course characteristics
 - Allows for identification of source of cross-national variation

Table 2: Disability insurance schemes considered

Austria (AT)	Staatliche Invaliditätspension
Belgium (BE)	Assurance invalidité légale/Wettelijke uitkering wegens arbeidsongeval of beroepsziekte; Pension de maladie, d'invalidité, maladie professionnelle/Wettelijke uitkering wegens ziekte of invaliditeit of tegemoetkoming aan personen met een handicap
Switzerland (CH)	Invalidenrente aus IV, assurance invalidité légale (AI) and Rendita invalidità (AI)
Germany (DE)	Erwerbsminderungsrente and Beamtenpension wegen Dienstunfähigkeit
Denmark (DK)	Offentlig sygedagpenge and offentlig førtidspension
Spain (ES)	Pensión pública contributiva y no contributiva de invalidez/incapacidad
France (FR)	Prestation publique d'invalidité (AAH, APA)
Greece (GR)	Σύνταξη αναπηρίας
Italy (IT)	Assicurazione pubblica di disabilità (anche assegno di accompagnamento)" and pensione pubblica di invalidità o di inabilità
Netherlands (NL)	WAO, Waz of invaliditeitspensioen and Algemene bijstandswet (Abw), IOAW/IOAZ, aanvullende bijstandsuitkering, Toeslagenwet (TW)
Sweden (SE)	Förtidspension (sjukersättning), yrkesskadepension, and sjukbidrag
England (UK)	Incapacity benefits (previously invalidity benefits)
United States (US)	SSDI and SSI disability pension

- **Demographic characteristics** (age and gender)
- **Health:**
 - self-reported health;
 - functional physical status: ADL, IADL, grip strength, walking speed;
 - mental health status: CES-D, 10-word recall
- **Generosity of the disability insurance:**
coverage, minimum disability level required, benefit generosity, medical assessment, vocational assessment

Table A2.1. Classification for the compensation dimension of the policy typology

Dimension	5 points	4 points	3 points	2 points	1 point	0 point
X. Compensation						
x1. Coverage	total population (residents)	some of those out of the labour force (e.g. congenital)	labour force plus means-tested non-contrib. scheme	labour force with voluntary self-insurance	labour force	employees
x2. Minimum disability level	0-25%	26-40%	41-55%	56-70%	71-85%	86-100%
x3. Disability level for full benefit	< 50%	50-61%	62-73%	74-85%	86-99%	100%
x4. Maximum benefit level	RR > = 75%, reasonable minimum	RR > = 75%, minimum not specified	75 > RR > = 50%, reasonable minimum	75 > RR > = 50%, minimum not specified	RR < 50%, reasonable minimum	RR < 50%, minimum not specified
x5. Permanence of benefits	strictly permanent	<i>de facto</i> permanent	self-reported review only	regulated review procedure	strictly temporary, unless fully (= 100%) disabled	strictly temporary in all cases
x6. Medical assessment	treating doctor exclusively	treating doctor predominantly	insurance doctor predominantly	insurance doctor exclusively	team of experts in the insurance	insurance team and two-step procedure
x7. Vocational assessment	strict own or usual occupation assessment	reference is made to one's previous earnings	own-occupation assessment for partial benefits	current labour market conditions are taken into account	all jobs available taken into account, leniently applied	all jobs available taken into account, strictly applied
x8. Sickness benefit level	RR = 100% also for long-term sickness absence	RR = 100% (short-term) > = 75% (long-term) sickness absence	RR > = 75% (short-term) > = 50% (long-term) sickness absence	75 > RR > = 50% for any type of sickness absence	RR > = 50% (short-term) < 50% (long-term) sickness absence	RR < 50% also for short-term sickness absence
x9. Sickness benefit duration	one year or more, short or no wage payment period	one year or more, significant wage payment period	six-twelve months, short or no wage payment period	six-twelve months, significant wage payment period	less than 6 months, short or no wage payment period	less than 6 months, significant wage payment period
x10. Unemployment benefit level and duration	DI > UE level, short duration of unemployment	DI > UE level, long duration of unemployment	similar levels, short duration of unemployment	similar levels, long duration of unemployment	DI < UE level, short duration of unemployment	DI < UE level, long duration of unemployment

RR = Replacement rate; DI = Disability benefit; UE = Unemployment benefit.

Source: OECD.

- **Lifetime Characteristics**

- **Life course health:** number of childhood diseases, periods of bad health, working gaps due to bad health, period of poor health
- **Life course others:** Childhood SES (rooms per person), Work Life (number of jobs), Marital Status

Work in progress

Regression Results

Dependent variable:

DI benefit recipient

	linear	t-value	probit	z-value	logit	z-value
age	-0,0012	-2,08	-0,0066	-1,27	-0,0162	-1,60
gender	-0,0562	-7,45	-0,3959	-6,33	-0,7919	-6,52
educ	-0,0020	-2,73	-0,0200	-3,10	-0,0428	-3,33
sphus	0,0409	14,59	0,3472	13,86	0,7034	14,10
adl	0,0236	3,05	0,0257	0,58	0,0206	0,26
iadl	0,0669	9,63	0,2181	5,34	0,3691	5,02
maxgrip	-0,0012	-3,76	-0,0078	-2,97	-0,0164	-3,23
eurod	0,0058	4,16	0,0332	3,08	0,0601	2,91
covg	0,0062	2,19	0,0557	2,19	0,0975	1,93
mind	0,0068	2,52	0,0630	2,61	0,1353	2,85
repl	0,0002	0,11	-0,0051	-0,30	-0,0044	-0,13
medi	0,0039	1,66	0,0211	1,00	0,0480	1,16
voca	-0,0178	-6,36	-0,1432	-6,00	-0,3035	-6,44
ill	-0,0057	-1,95	-0,0370	-1,53	-0,0700	-1,49
ill_adult	0,0380	10,19	0,1536	6,61	0,2574	6,15
sick	0,1187	6,82	0,4723	4,63	0,7934	4,31
d_poorhealth	0,0536	9,80	0,4662	10,19	0,9502	10,24
rpp	-0,0038	-0,84	-0,0616	-1,01	-0,1163	-0,97
books	0,0029	1,23	0,0215	1,06	0,0324	0,81
d_math	-0,0057	-1,09	-0,0623	-1,34	-0,1190	-1,30
d_phd	0,0264	4,59	0,2163	4,57	0,3898	4,24
d_psd	-0,0070	-1,37	-0,0411	-0,93	-0,0811	-0,94
jobs	-0,0048	-3,70	-0,0329	-2,94	-0,0619	-2,83
d_mar	-0,0176	-1,77	-0,1077	-1,32	-0,2227	-1,43
d_div	0,0137	2,02	0,1009	1,80	0,1937	1,79
d_wid	0,0034	0,34	0,0334	0,41	0,0441	0,28
constant	0,1623	3,20	-1,3514	-3,13	-2,1308	-2,53
R ²	0,1443		0,2291		0,2286	

Data from SHARE wave 2 and SHARELIFE, 10364 observations.

Based on linear regression model

Demographics: **0,16 %**

Health: **9,78 %**

Full: 15,88 %

OECD Indicators: **1,3 %**

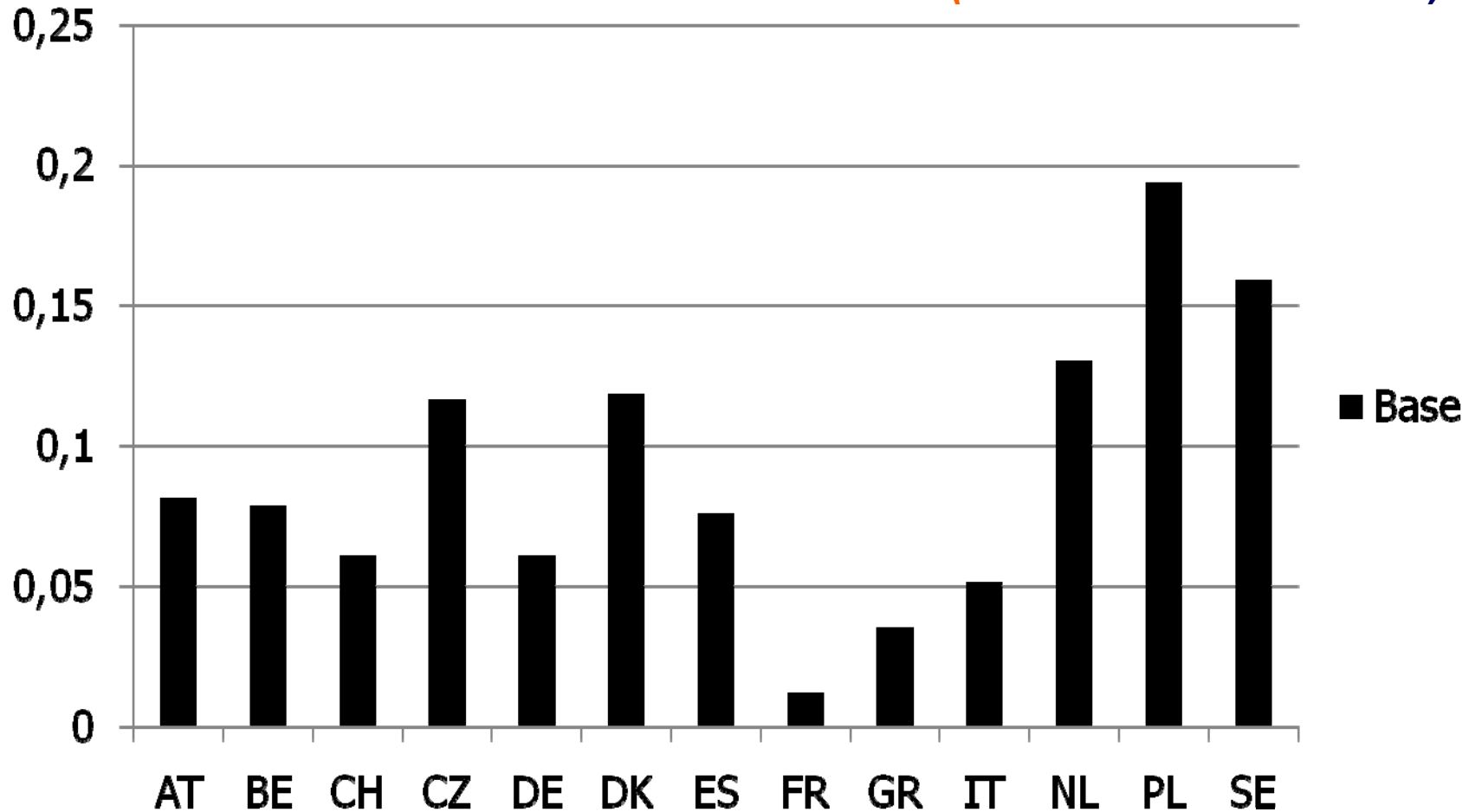
Life Course: **9,26 %**

LC Health: **9,05 %**

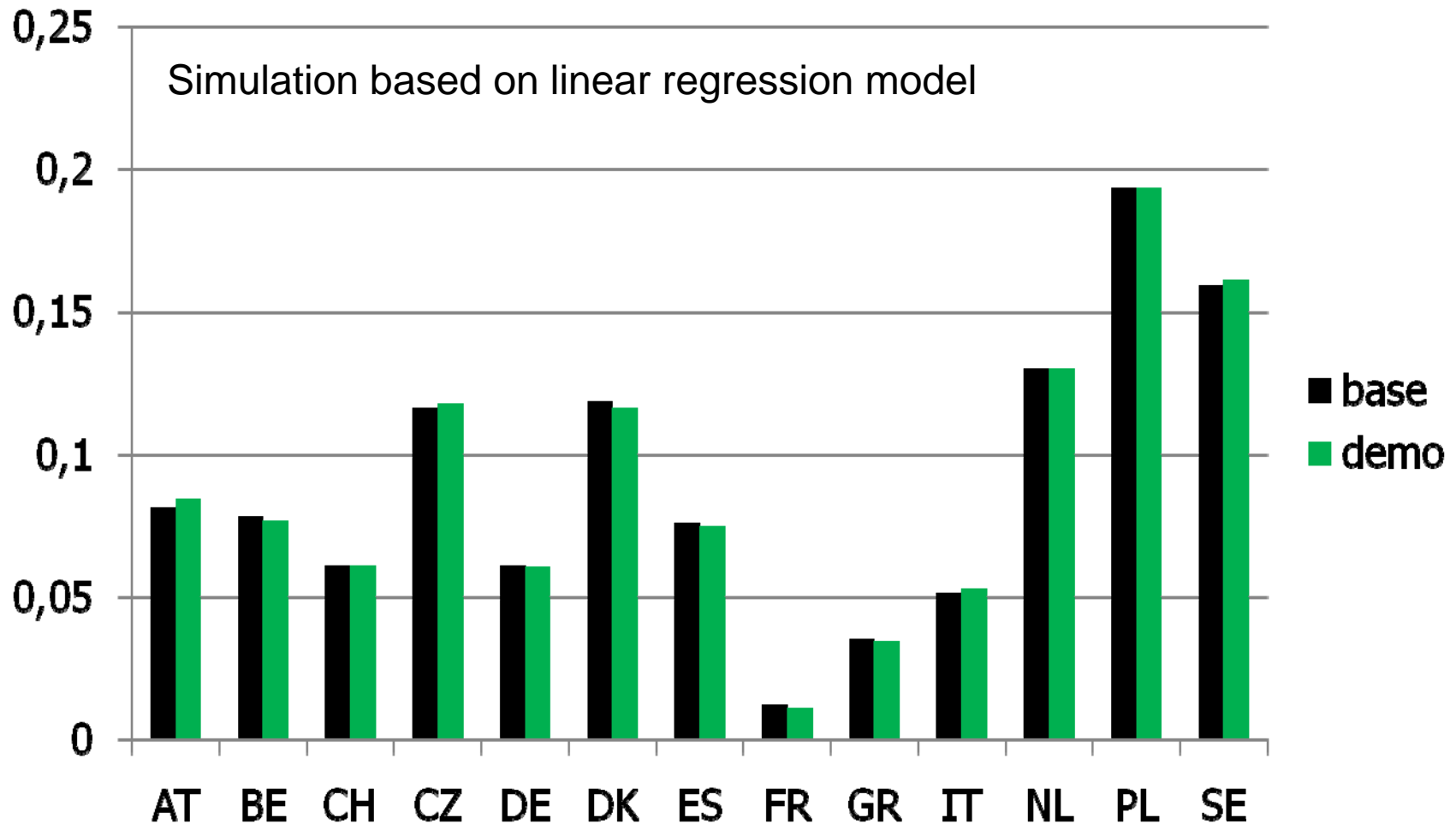
LC others: **0,74 %**

Simulation of DI benefit recipiency

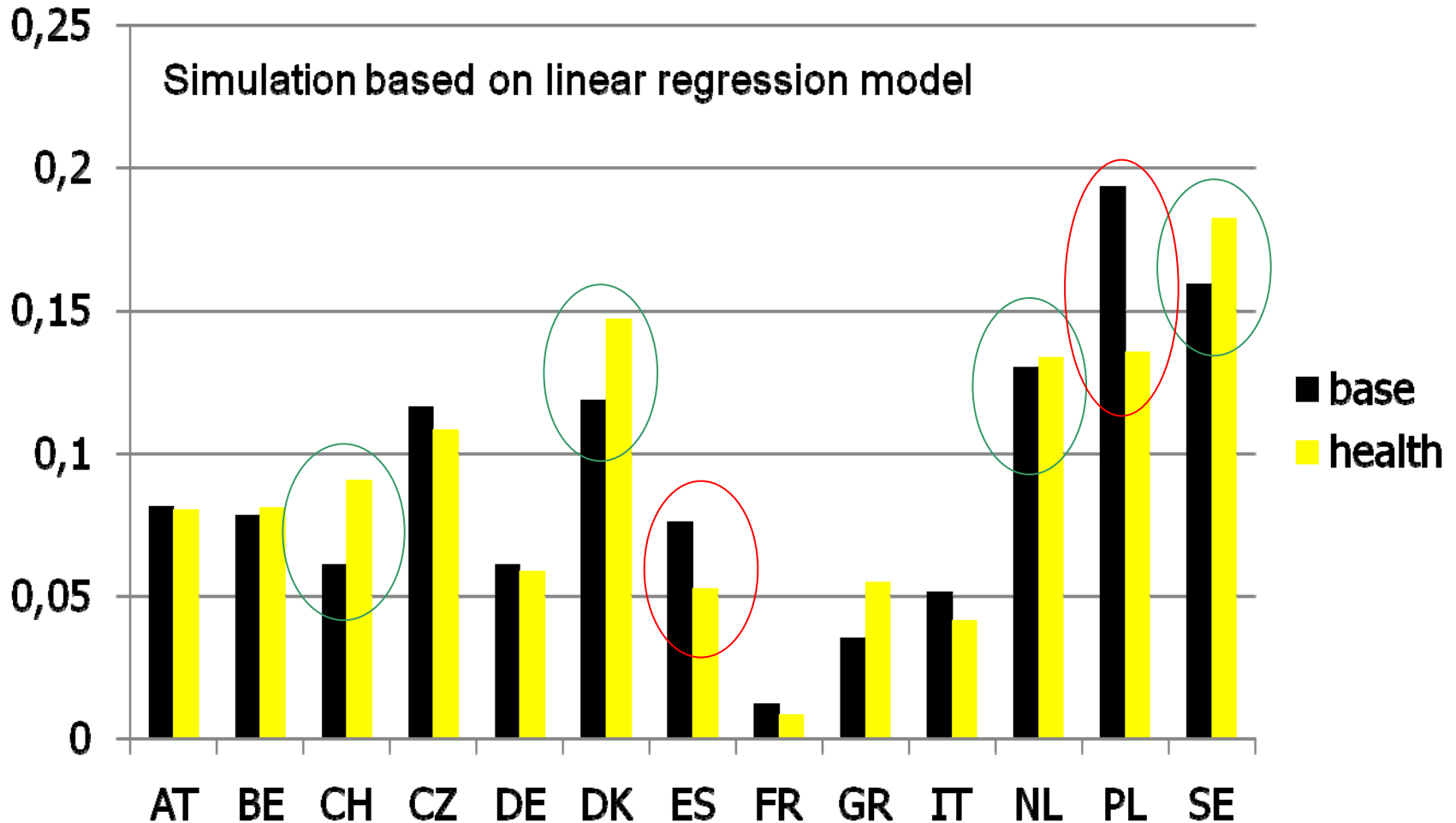
(cross-national variance)



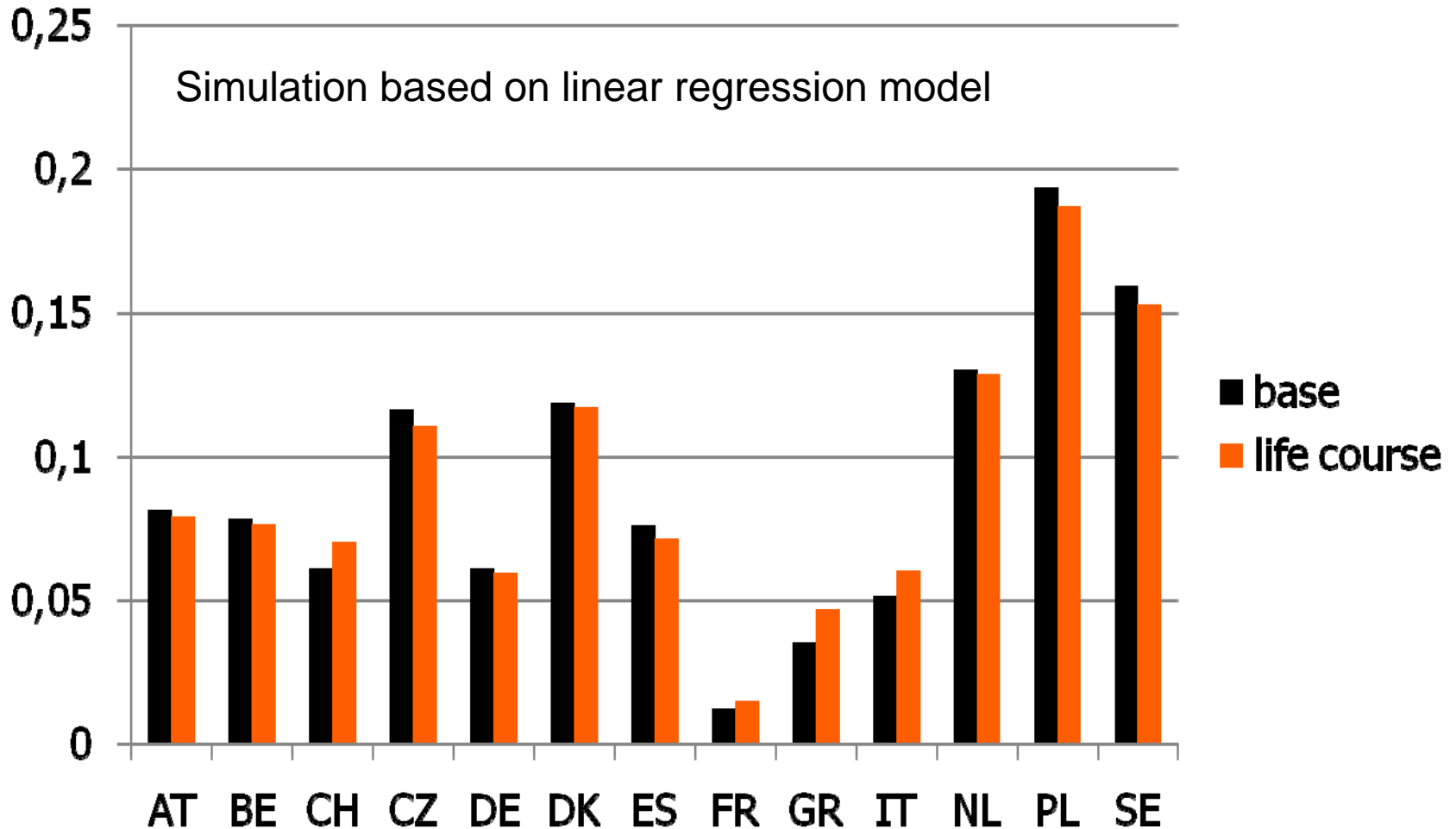
Simulation of DI benefit reciprocity



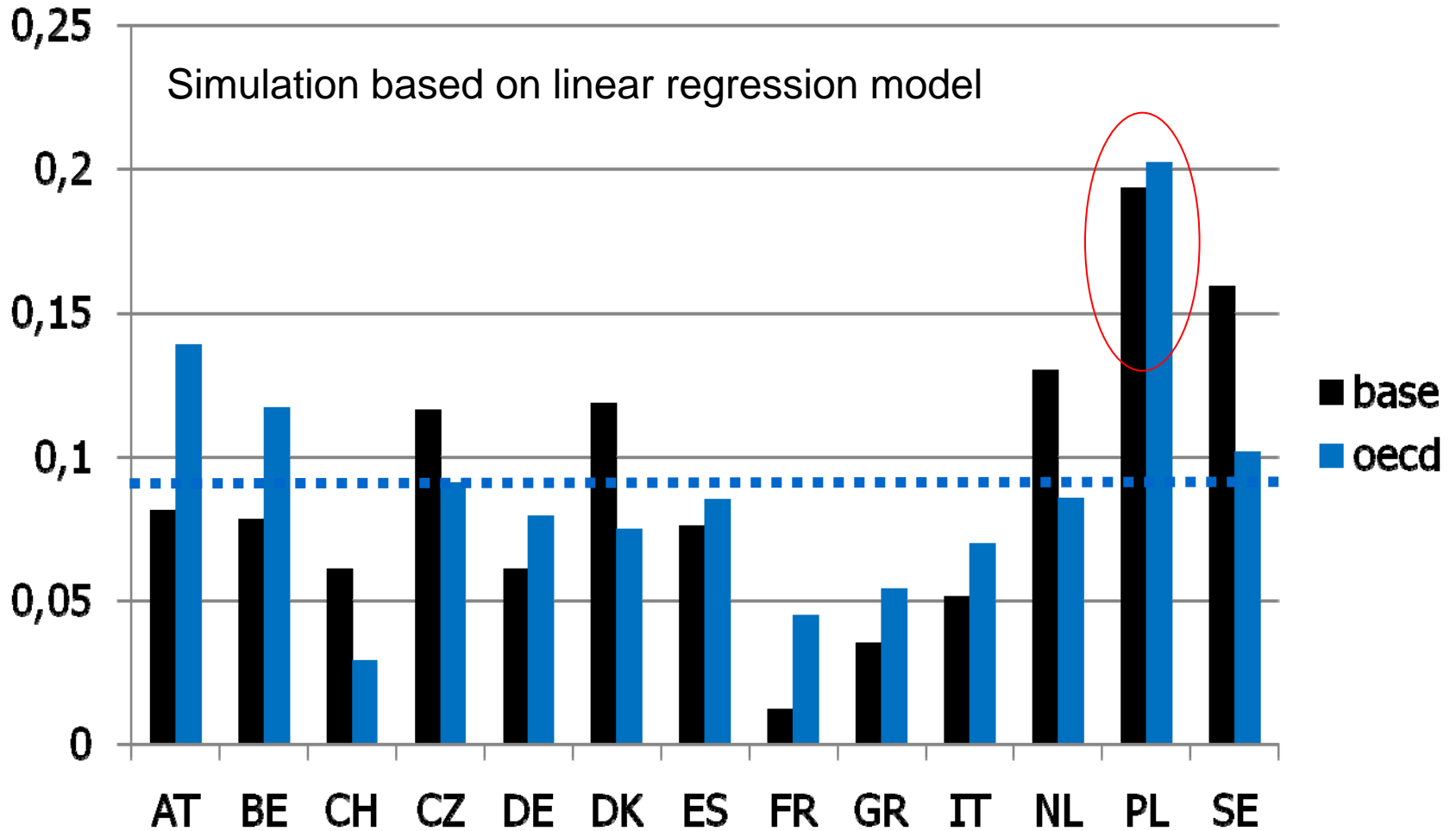
Simulation of DI benefit recipiency



Simulation of DI benefit reciprocity

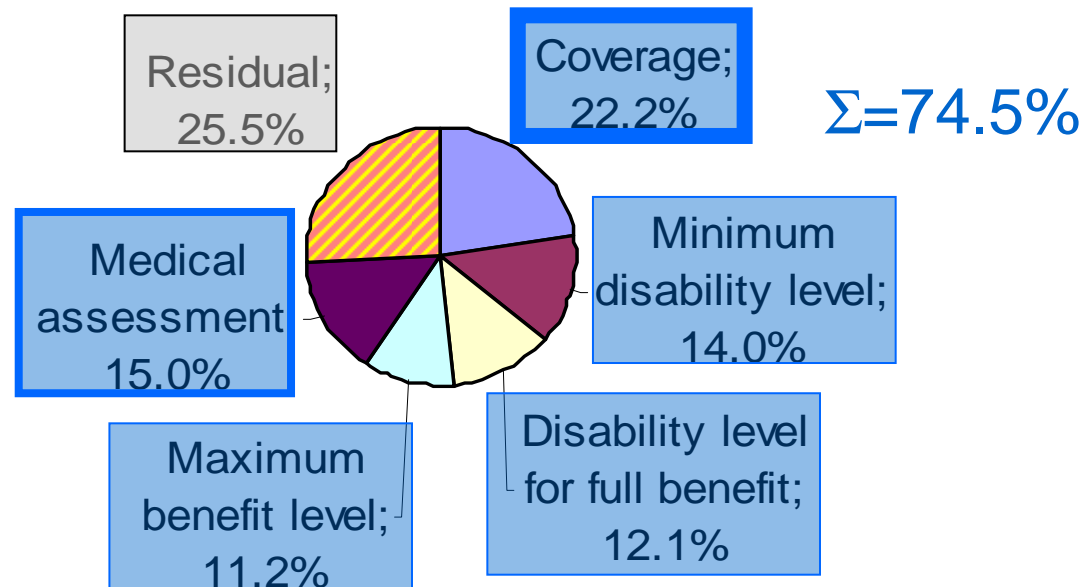


Simulation of DI benefit recipiency



Decomposition of *cross-national* variance

Regression includes age, gender, a large set of health indicators and five OECD institutional indicators (OECD 2003, Table A2.1, p.186):



▶ Key Results

- ▶ Life course variables explain intra-national differences but not cross-national differences in DI benefit reciprocity rates
- ▶ Variables describing generosity of DI remain the key explanation of cross-national differences, even after correcting for current as well as life course health

▶ Outlook

- ▶ Including a variable taking into account „work quality“
- ▶ Including data from HRS and ELSA
- ▶ Interaction effects
- ▶ Life course approach: analyze spells of DI