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COMPARING APPLES AND ORANGES?

An analysis of the role of objective health and institutions in explaining country differences in benefit receipt, using 2013 SHARE data on people over 50

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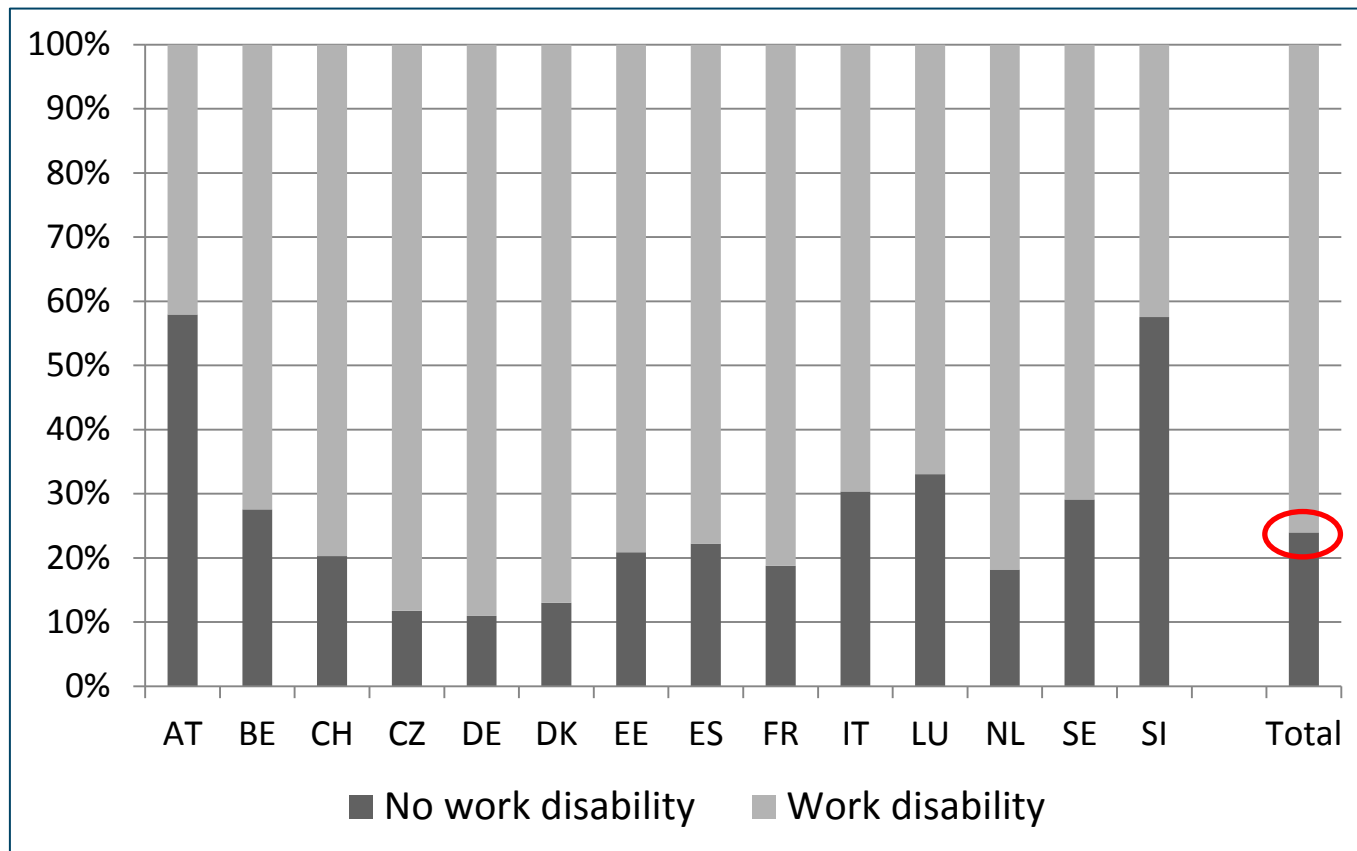
Disability benefits for whom?



Self-reported work disability

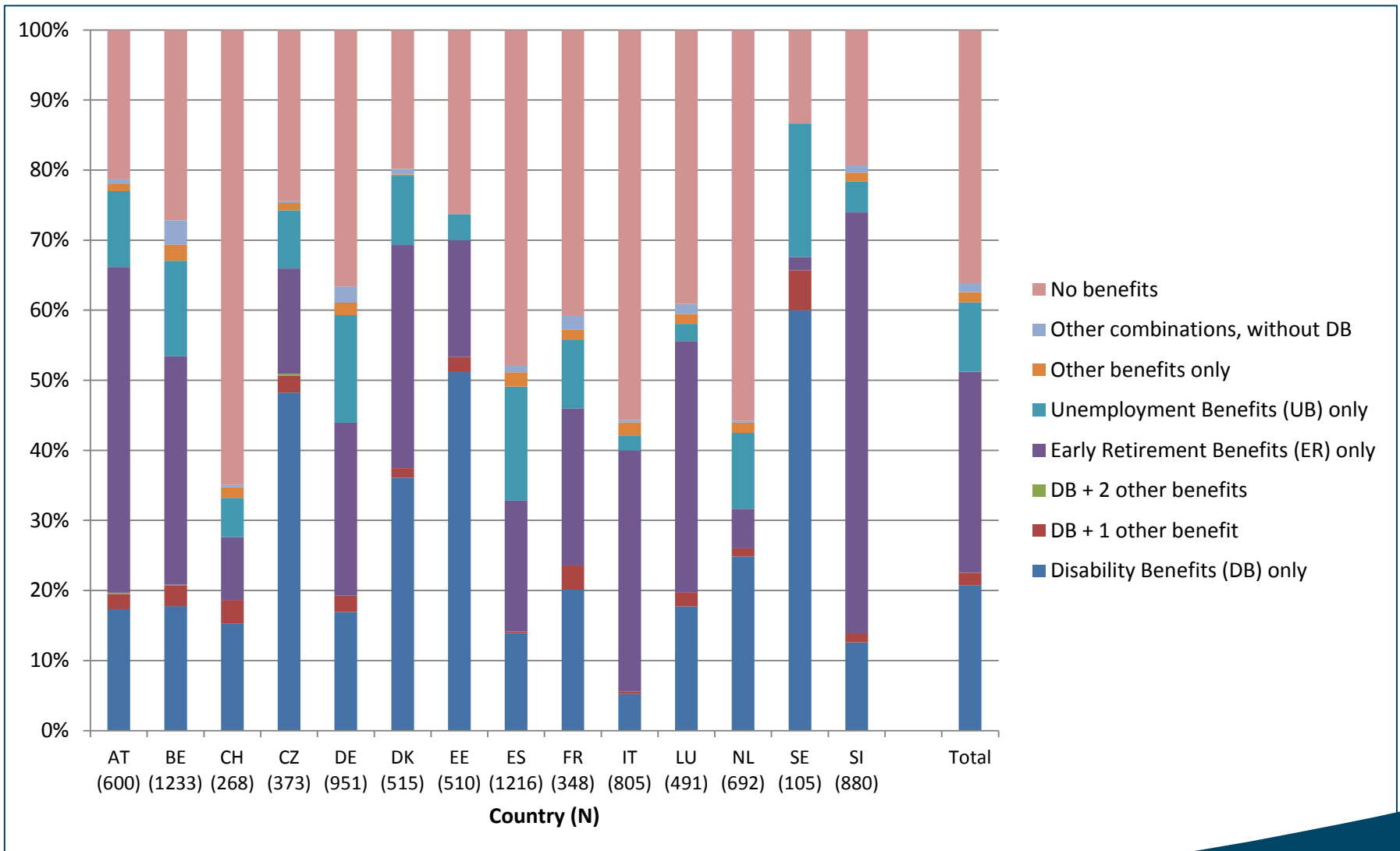
PH061: 'Do you have any health problem or disability that limits the kind or amount of paid work you can do?'

- 24% of disability beneficiaries (age 50+) say 'NO'...



Benefit receipt across countries

(Benefits previous year, currently non-working respondents)



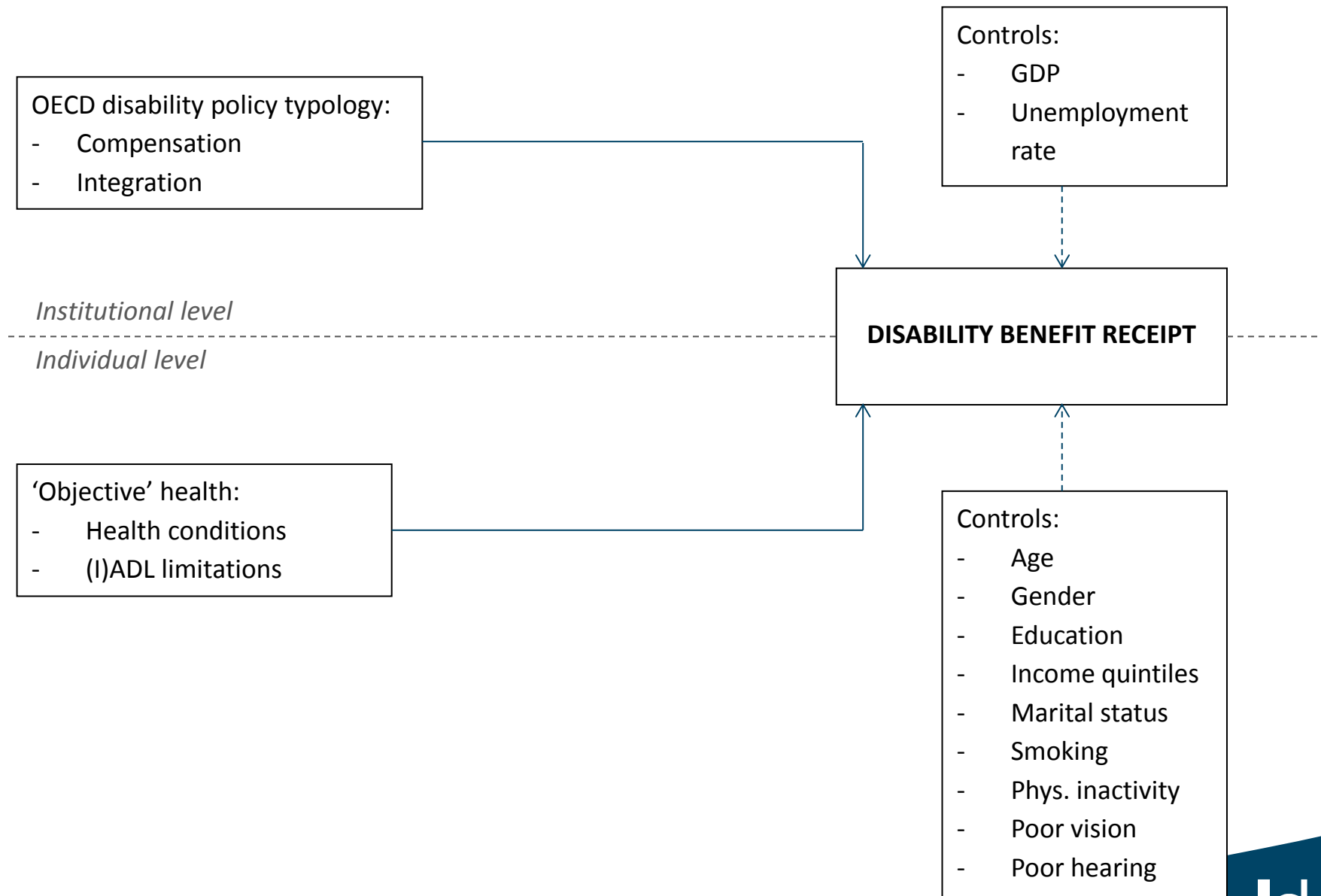
Research question

To what extent can cross-country variation in disability benefit receipt be explained by individual and institutional characteristics?

- a. Health as the main driver for differences in DB receipt?
 - Disability benefit schemes particularly interesting:
 1. Health is an intuitive explanatory factor for DB receipt
 2. Outflow from DB is virtually non-existent in the 50+ age group
- b. If not: explanations at the institutional level?
 - Cross-country comparability



Conceptual model



Data & methods

- Data and sample:
 - SHARE wave 5 (2013), 14 countries (Israel excluded)
 - $50 \leq \text{age group} < \text{official retirement age}$
- Methods:
 - Initial analysis: Oaxaca-Blinder decomposition
 - % country differences explained by health variables
 - % country differences unexplained
 - Logistic regression
 - More in-depth analysis, including institutional characteristics

Oaxaca-Blinder decomposition

(Non-working respondents)

	DB receipt	Absolute difference with Belgium	Explained by health	Unexplained	% of the difference explained by health
BE (ref)	22.6	-	-	-	-
AT	22.2	0.4	-	-	-
CH	22.1	0.5	-	-	-
CZ	49.3	26.7***	10.4***	16.3***	39.0%
DE	21.0	1.6	-	-	-
DK	30.5	7.9**	1.8	9.7***	0%
EE	54.8	32.2***	10.0***	22.2***	31.1%
ES	12.8	9.8***	4.9**	4.9**	50.0%
FR	22.5	0.0	-	-	-
IT	4.3	18.3***	5.3***	13.0***	29.0%
LU	20.3	2.3	-	-	-
NL	30.3	7.7***	0.9	6.8***	0%
SE	54.6	32.0***	6.3	25.7***	0%
SI	16.8	5.8***	-6.3***	0.5	-

Y = dummy disability benefit receipt.

X = health conditions, (I)ADL limitations, and micro-level control variables (age, gender, education, income quintiles, marital status, smoking, physical inactivity, poor vision, poor hearing)

Oaxaca-Blinder decomposition: A closer look at 2 countries [1]



- Belgium versus Estonia:

- DB receipt Belgium: 22.6%
- DB receipt Estonia: 54.8%

Absolute difference =
32.2 percentage points

Explained by health variables
and micro-level controls¹:

10.0 of 32.2 \approx 39% of the gap

Part that remains unexplained:

22.2 of 32.2 \approx 61% of the gap

¹Health conditions, (I)ADL limitations, and age, gender, education, income quintiles, marital status, smoking, physical inactivity, poor vision, poor hearing.

Oaxaca-Blinder decomposition: A closer look at 2 countries [2]



- Belgium versus the Netherlands:

- DB receipt Belgium: 22.6%
- DB receipt Netherlands: 30.3%

Absolute difference =
7.7 percentage points

Explained by health variables
and micro-level controls¹ :

~~0.9 of 7.7;~~
 $p > .10 \rightarrow$ not significant

Part that remains unexplained:

6.8 of 7.7

¹Health conditions, (I)ADL limitations, and age, gender, education, income quintiles, marital status, smoking, physical inactivity, poor vision, poor hearing.

Disability benefit receipt (dummy)	Model 1: Only micro-variables		Model 2: Macro-variables + country	
	Logit coefficient	Std. Error	Logit coefficient	Std. Error
Severe conditions (ref = 0)				
• 1 or 2	1.042***	0.105	1.046***	0.110
• 3 or more	1.161***	0.427	1.328***	0.412
Mild conditions (ref = 0)				
• 1 or 2	0.721***	0.121	0.671***	0.129
• 3 or more	1.046***	0.151	1.038***	0.158
ADL limitations (ref = 0)				
• 1	0.665***	0.185	0.696***	0.186
• 2	0.446	0.318	0.503	0.338
• 3 or more	0.617	0.381	0.667	0.413
IADL limitations (ref = 0)				
• 1	1.194***	0.143	1.054***	0.149
• 2	1.850***	0.248	1.731***	0.259
• 3 or more	1.960***	0.323	2.074***	0.346
Compensation (OECD indicator)	-	-	-0.189***	0.064
Integration (OECD indicator)	-	-	-0.215***	0.070
Constant	-3,780***		9.717**	
N	19,293		19,293	

Micro-level controls (model 1 and 2): age, gender, education, income quintiles, marital status, smoking, physical inactivity, poor vision, poor hearing. Macro-level controls (model 2): GDP/capita, unemployment rate 55-64

Summary and preliminary conclusions

- Aim: explain country differences in disability benefit reciprocity rates (age 50+)
 - Objective health and institutional indicators
- Objective health is an important factor
 - Significant effects in logistic regression
 - Oaxaca-Blinder: substantial part of country difference remains unexplained
- Institutional indicators
 - Compensation dimension: effect unclear
 - Integration dimension: activation efforts seem to decrease DB reciprocity rates

Thank you for your attention!

Questions/ suggestions?
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ADDITIONAL SLIDES FOR CLARIFICATION

Age-gender composition by country

Country	Mean age	Female	N
AT	57.1	44.0%	1,326
BE	57.4	54.5%	2,739
CH	57.9	55.6%	1,252
CZ	56.1	46.1%	1,300
DE	57.1	54.8%	2,916
DK	57.3	54.8%	2,063
EE	57.1	55.7%	1,698
ES	57.9	54.0%	2,611
FR	56.3	57.7%	1,247
IT	57.4	48.5%	1,754
LU	57.5	54.9%	895
NL	58.0	58.0%	1,876
SE	56.2	58.5%	938
SI	58.1	55.3%	1,360
Total	57.3	53.8%	23,975

Country's mean age > overall mean age

% females within country > 50%

Health conditions diagnosed by doctor.

Categorization severe & mild conditions

PH006

[Has a doctor ever told you that you had/Do you currently have] any of the conditions on this card? [With this we mean that a doctor has told you that you have this condition, and that you are either currently being treated for or bothered by this condition.] Please tell me the number or numbers of the conditions.

SEVERE

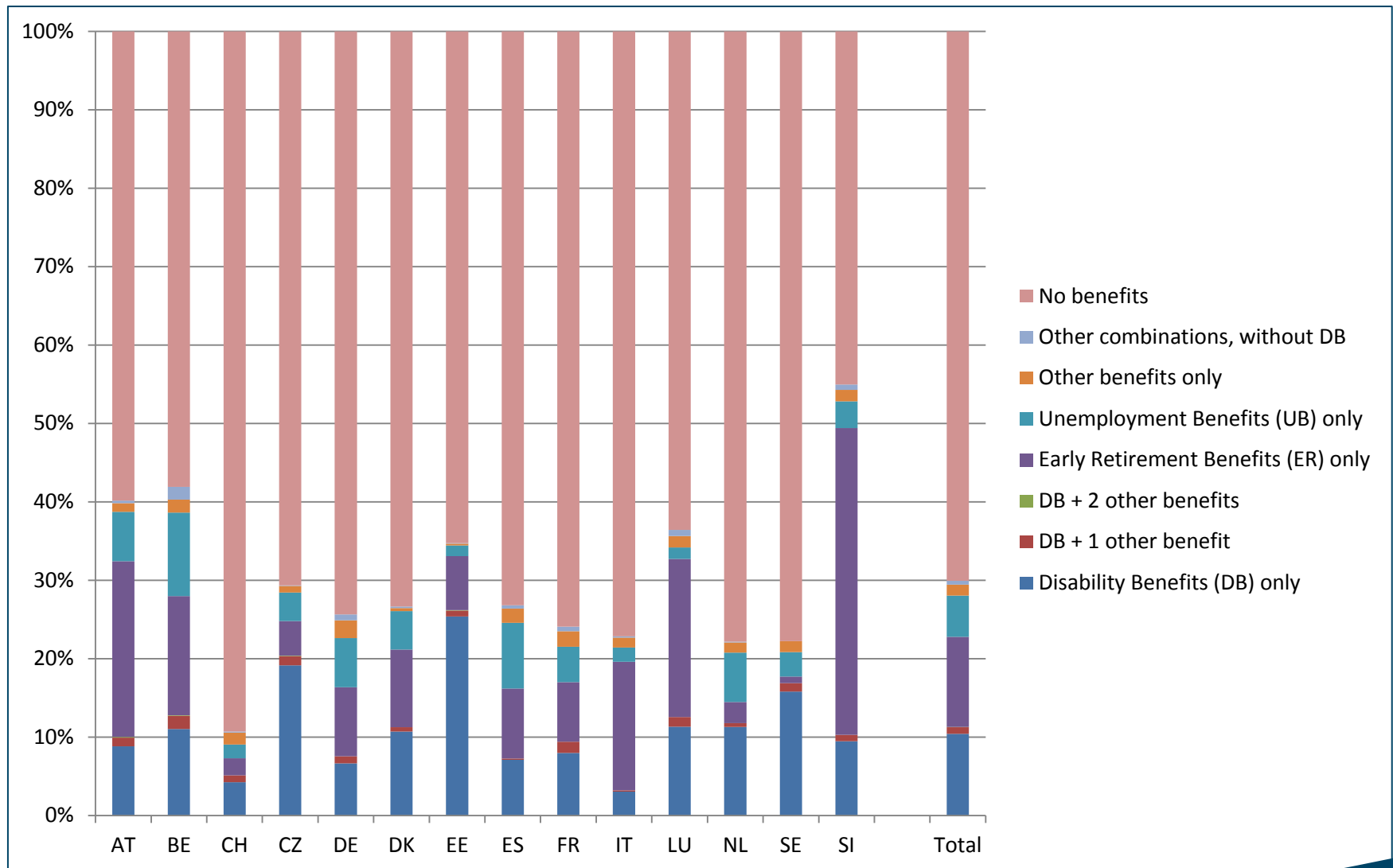
- 1. A heart attack including myocardial infarction or coronary thrombosis or any other heart problem including congestive heart failure
- 4. A stroke or cerebral vascular disease
- 6. Chronic lung disease such as chronic bronchitis or emphysema
- 10. Cancer or malignant tumour, including leukaemia or lymphoma, but excluding minor skin cancers
- 12. Parkinson disease
- 14. Hip fracture
- 16. Alzheimer's disease, dementia, organic brain syndrome, senility or any other serious memory impairment

MILD

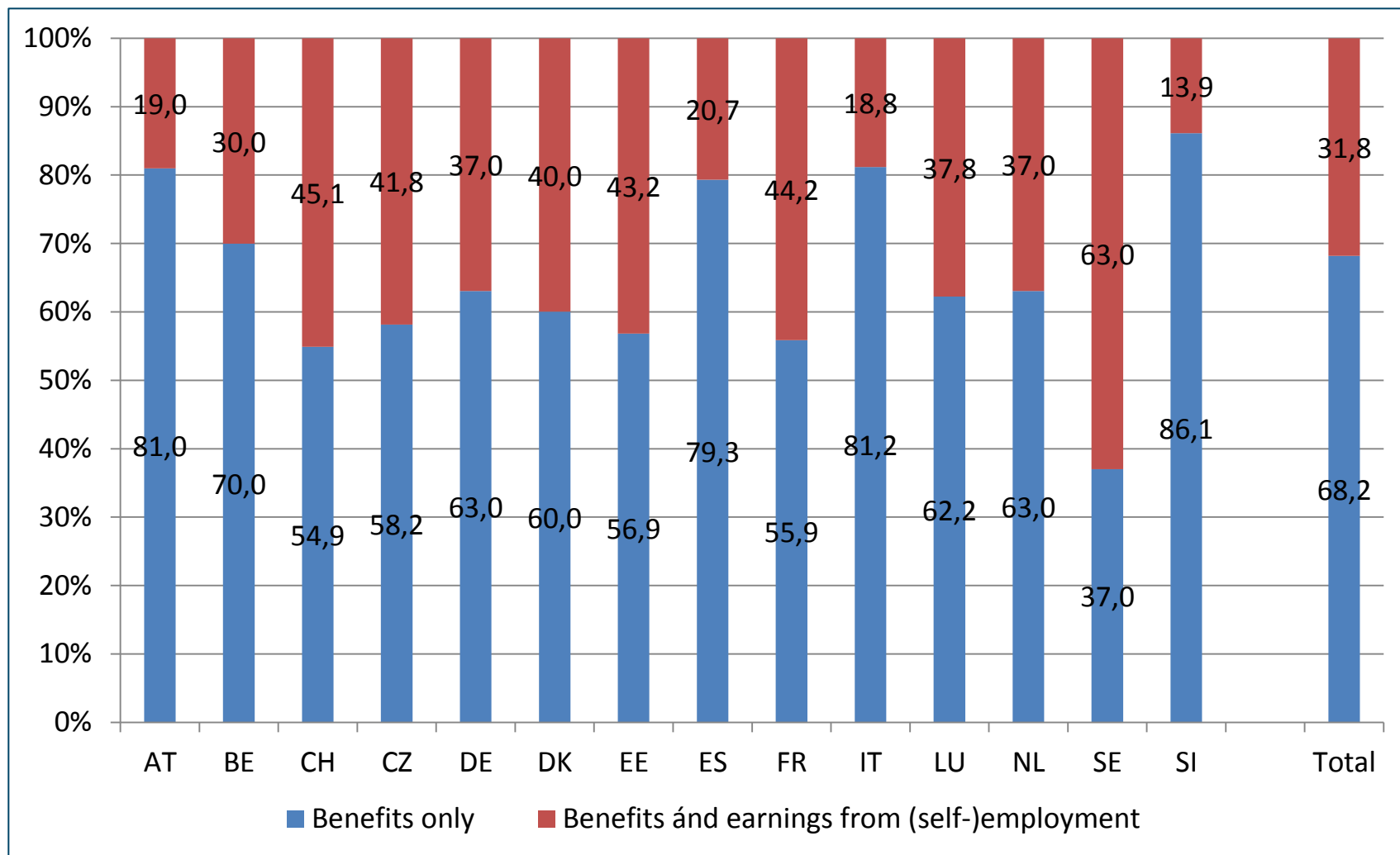
- 2. High blood pressure or hypertension
- 3. High blood cholesterol
- 5. Diabetes or high blood sugar
- 11. Stomach or duodenal ulcer, peptic ulcer
- 13. Cataracts
- 15. Other fractures
- 19. Rheumatoid Arthritis
- 20. Osteoarthritis, or other rheumatism
- 96. None
- 97. Other conditions, not yet mentioned
- 18. Other affective or emotional disorders, including anxiety, nervous or psychiatric problems

(Following the example of:
Kalwij, A., & Vermeulen, F. (2007). Health and Labour Force Participation of Older People in Europe: What Do Objective Health Indicators Add to the Analysis? *Health Econ.* doi: 10.1002/hec.1285)

Benefit receipt across countries (entire sample)



Income from public benefits and from (self-)employment in previous year



EP071



Receiving 0, 1 or multiple benefits (multibenefits):

EP071_IncomeSources

Have you received income from any of these sources in the year [STR (Year - 1)]?

1. Public old age pension
2. Public old age supplementary pension or public old age second pension
3. Public early retirement or pre-retirement pension
4. Main public disability insurance pension, or sickness benefits
5. Secondary public disability insurance pension, or sickness benefits
6. Public unemployment benefit or insurance
7. Main public survivor pension from your spouse or partner
8. Secondary public survivor pension from your spouse or partner
9. Public war pension
10. Public long-term care insurance
96. None of these

1. No benefits
2. Only disability benefits (DB)
3. Only own (early) retirement benefits (ER)
4. Only unemployment benefits (UB)
5. Only 'other benefits' (OB)
6. Combination of disability benefits with 1 other benefit
7. Combination of disability benefits with 2 other benefits
8. Combination of 2 or 3 benefits, not including disability benefits

Oaxaca-Blinder decomposition (entire sample)

with health conditions and micro-level control variables

	DB receipt	Absolute difference with Belgium	Explained by health	Unexplained	% of the difference explained by health
BE (ref)	12.8	-	-	-	-
AT	10.2	2.6**	0.5	2.1	-
CH	5.2	7.7***	2.0***	5.7***	26.0%
CZ	18.6	5.8***	1.1	4.7***	-
DE	7.8	5.1***	0.5	-5.5***	-
DK	9.1	3.7***	0.5	3.3***	-
EE	26.0	13.2***	1.4*	11.8***	10.6%
ES	7.1	5.7***	0.7	5.0***	-
FR	8.9	4.0***	1.4**	2.5*	35.0%
IT	2.7	10.1***	0.8***	9.3***	7.9%
LU	12.4	0.5	1.1	-1.6	-
NL	11.6	1.3	0.9*	0.3	-
SE	15.6	2.8*	-2.1***	4.9***	-
SI	11.3	1.6	-1.8***	0.2	-

Table 3.A1.1. OECD disability policy typology: classification of the indicator scores

DIMENSION	5 points	4 points	3 points	2 points	1 point	0 points
X. Compensation						
X1. Population 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 required disability or work incapacity level	0-25%	26-40%	41-55%	56-70%	71-85%	86-100%
X3. Disability or work incapacity level for full benefit	< 50%	50-61%	62-73%	74-85%	86-99%	100%
X4. Maximum disability benefit payment 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 benefit payments	Strictly permanent	De facto permanent	Self-reported review only	Regulated review procedure	Strictly temporary, unless fully (= 100%) disabled	Strictly temporary in all cases
X6. Medical assessment criteria	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 criteria	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 payment 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 payment 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 six months, short or no wage payment period	Less than six months, significant wage payment period
X10. Sickness absence monitoring	Lenient sickness certificate requirements	Sickness certificate and occupational health service with risk prevention	Frequent sickness certificates	Strict follow-up steps with early intervention and risk profiling, but no sanctions	Strict controls of sickness certificate with own assessment of illness if necessary	Strict follow-up steps with early intervention and risk profiling, including sanctions

Note: RR = replacement rate.

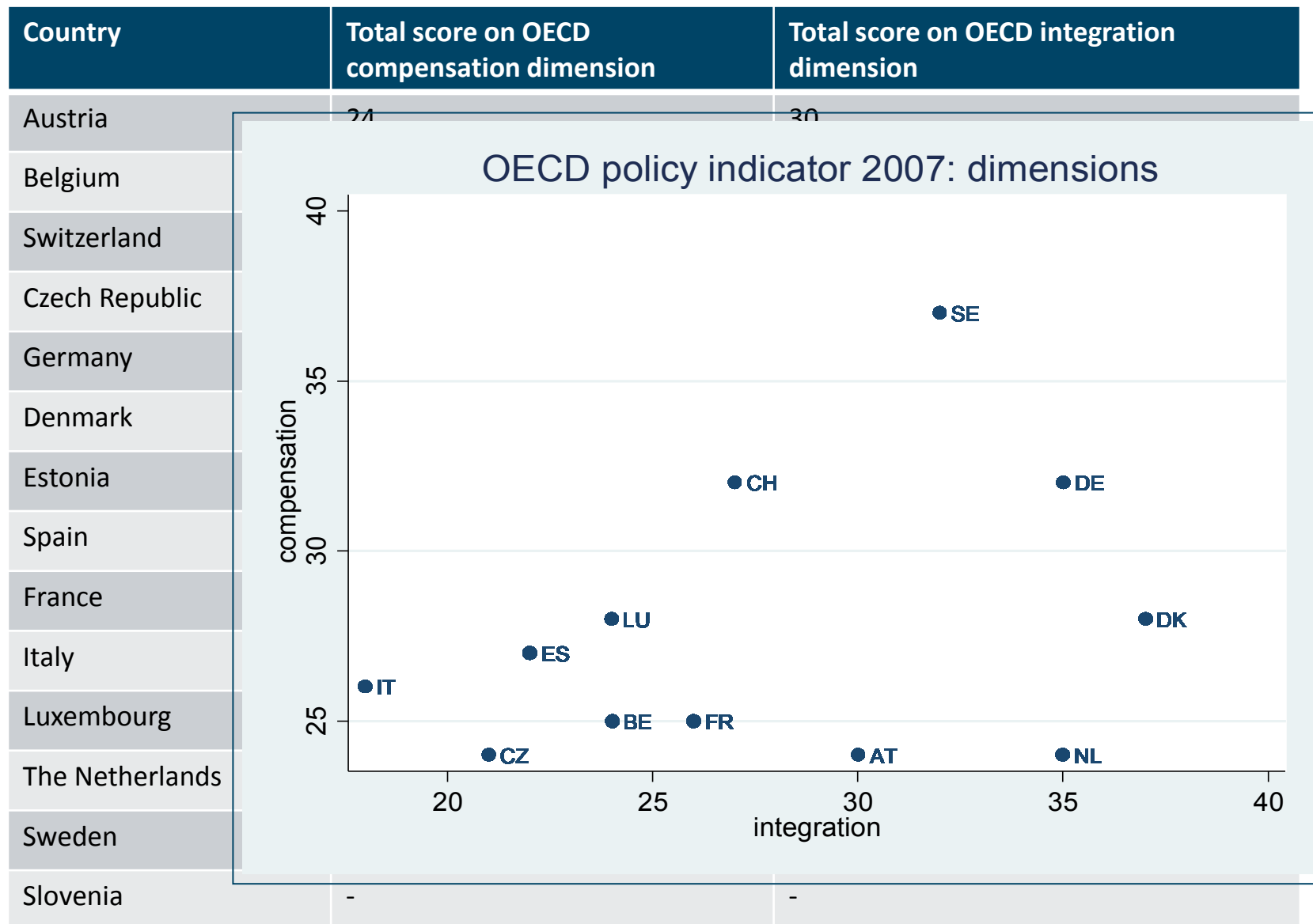
Source: OECD (2010). *Sickness, Disability and Work: Breaking the Barriers. A synthesis of findings across OECD countries*

Table 3.A1.1. **OECD disability policy typology: classification of the indicator scores** (cont.)

DIMENSION	<i>5 points</i>	<i>4 points</i>	<i>3 points</i>	<i>2 points</i>	<i>1 point</i>	<i>0 points</i>
Y. Integration						
Y1. Consistency across supports in coverage rules	All programmes accessible	Minor discrepancy, flexible mixture	Minor discrepancy, restricted mixture	Major discrepancy, flexible mixture	Major discrepancy, restricted mixture	Strong differences in eligibility
Y2. Complexity of the benefits and supports systems	Same agency for assessment for all programmes	One agency for integration, benefits co-ordinated	Same agency for benefits and vocational rehabilitation	One agency for integration, benefits not co-ordinated	Different agencies for most programmes	Different agencies for all kinds of assessments
Y3. Employer obligations for their employees and new hires	Major obligations towards employees and new applicants	Major obligations towards employees, less for applicants	Some obligations towards employees and new applicants	Some obligations towards employees, none for applicants	No obligations at all, but dismissal protection	No obligations of any kind
Y4. Supported employment programmes	Strong programme, permanent option	Strong programme, only time-limited	Intermediary, also permanent	Intermediary, only time-limited	Very limited programme	Not existent
Y5. Subsidised employment programmes	Strong and flexible programme, with a permanent option	Strong and flexible programme, but time-limited	Intermediary, either permanent or flexible	Intermediary, neither permanent nor flexible	Very limited programme	Not existent
Y6. Sheltered employment programmes	Strong focus, with significant transition rates	Strong focus, but largely permanent employment	Intermediary focus, with some "new" attempts	Intermediary focus, "traditional" programme	Very limited programme	Not existent
Y7. Comprehensiveness of vocational rehabilitation	Compulsory rehabilitation with large spending	Compulsory rehabilitation with low spending	Intermediary view, relatively large spending	Intermediary view, relatively low spending	Voluntary rehabilitation with large spending	Voluntary rehabilitation with low spending
Y8. Timing of vocational rehabilitation	In theory and practice any time (e.g. still at work)	In theory any time, in practice not really early	Early intervention increasingly encouraged	Generally <i>de facto</i> relatively late intervention	After long-term sickness or for disability recipients	Only for disability benefit recipients
Y9. Disability benefit suspension option	Two years or more	At least one but less than two years	More than three but less than 12 months	Up to three months	Some, but not for disability benefits	None
Y10. Work incentives for beneficiaries	Permanent in-work benefit provided	Benefit continued for a considerable (trial) period	Income beyond pre-disability level allowed	Income up to pre-disability level, also partial benefit	Income up to pre-disability level, no partial benefit	Some additional income allowed

Source: OECD (2010). *Sickness, Disability and Work: Breaking the Barriers. A synthesis of findings across OECD countries*

Note: RR = replacement rate.



Scores on scale 0-50.

- Compensation dimension: higher score = easier access, higher benefit levels, longer duration, etc.
- Integration dimension: higher score = more active approach