Precarious Careers in Research

Country Fiches

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This report contains the country fiches for the main report on precarious careers in research.

The information presented in the main report in section 4 is in the following presented at the country level, using the list of indicators below. Note that all indicators have been normalised to be read in the same way, with values to the right indicating "better" values. Indicators with the sign <-> have been inverted for that purpose.

List of countries

Indicator list

Indicator	Relationship Precarity – Indicator	Labels	Data source
Contract context: Job availability		**Context**	
R&D expenditure per inhabitant, PPS	+	R&D expenditure per capita	Eurostat
Researchers per 1.000 of population	+	Researchers per 1.000 of population	Eurostat
Satisfaction with research funding	+	Satisfaction with research funding	MORE
Growth difference PhD graduates vs. R&D expenditures	-	Growth PhD graduates vs. R&D expenditures	
Temporal		**Temporal**	
Share of fixed-term contracts (academic sector)	-	Fixed-term contracts (academic sector)	MORE4 (academic only)
Share of fixed-term contracts (private sector)	-	Fixed-term contracts (private sector)	Researcher Survey (industry only)
Share of fixed-term contracts below the age of 35 (academic sector)	-	Fixed-term contracts below 35 (academic)	
Share of part-time contracts (academic sector)	-	Part-time contracts (academic)	MORE4 (academic only)
Share of part-time contracts (private sector)	-	Part-time contracts (private)	Researcher Survey (industry only)
Organisational		**Organisational**	
Satisfaction with research autonomy (academic sector)	+	Research autonomy (academic)	MORE4 (academic only)
Balance between teaching and research (satisfaction)	+	Teaching vs. research (academic)	MORE4 (academic only)
Work intensity (share of working to tight deadlines)	-	Work intensity (deadlines)	EWCS
Work intensity (Workdays with more than 10 hours)	-	Work intensity (10 hour workdays)	EWCS
Economic		**Economic**	
Share of researchers without contract (academic sector)	-	Researchers without contract (academic)	MORE4 (academic only)
Share of R1 researchers without contract (academic sector)	-	R1 researchers without contract (academic)	MORE4 (academic only)
Level of yearly net salary in PPS (academic&private, across all career stages)	+	Yearly net salary	SES, Researcher Survey, Pay scales, Country experts, Job Boards
Relation to average economy-wide salary, index		Relation to average economy-wide salary	
Level of yearly net salary, PPS (academic, career stages R1&2)	+	Yearly net salary (academic, R1&2)	

Indicator	Relationship Precarity - Indicator	Labels	Data source
Level of yearly net salary, PPS (academic, career stages R3&4)	+	Yearly net salary (academic, R3&4)	
Level of yearly net salary, PPS (private, career stages R1&2)	+	Yearly net salary (private, R1&2)	
Level of yearly net salary, PPS (private, career stages R3&4)	+	Yearly net salary (private, R3&4)	
Possibility of additional income sources	+	Additional income sources	Researcher Survey
Perception of remuneration (neither well nor reasonably paid)	-	Perception of remuneration	MORE q33
Perception of remuneration: academic sector pays worse than private sector	-	Perception of remuneration (academic vs. private)	MORE q35
Dissatisfaction with remuneration (private sector)	-	Dissatisfaction with remuneration (private)	Researcher Survey (industry only)
Dissatisfaction with salary progression (private sector)	-	Dissatisfaction with salary progression (private)	Researcher Survey
Satisfaction with job security (academic sector)	+	Satisfaction with job security (academic)	MORE q32
Satisfaction with pension plan (academic sector)	+	Satisfaction with pension plan (academic)	
Satisfaction with social security (academic sector)	+	Satisfaction with social security (academic)	
Career		**Career**	
Satisfaction with quality of training and education (academic sector)	+	Quality of training and education (academic)	MORE q32
Dissatisfaction with opportunities for training and development (private sector)	-	Training and development (private - dissatis.)	Researcher Survey
Career progression – time it takes to career stage R3 (established researcher) (academic sector)	-	Career progression – time to R3 (academic)	MORE4 q14-q18
Satisfaction with career perspectives (academic sector)	+	Satisfaction with career perspectives (academic)	MORE q32
Career paths are transparent and clear-cut (perception)	+	Transparent and clear-cut career paths	MORE4 data q38
Career progression is sufficiently merit-based (perception)	+	Merit-based career progression	MORE4 data q38
Tenured contract based on merit only is common (perception)	+	Tenure based on merit	MORE4 data q38
Dissatisfaction with research assessment (private sector)	-	Research assessment (private, dissatisf.)	Researcher Survey
Confidence in career prospects (academic sector)	+	Confidence in career (academic)	MORE q47
Forced international mobility because of no options for research	-	Forced international mobility	MORE q78
Shape of the pyramid: Share of early career stage positions (R1/R2) in total (academic sector)	-	Share of R1&R2 (academic) - shape of pyramid	MORE4 data
Social		**Social**	

Indicator	Relationship Precarity - Indicator	Labels	Data source
Strictness of regulations on hiring fixed-term workers	.	Regulations on hiring fixed-term workers	OECD employment protection legislation database
Collective bargaining coverage	.	Collective bargaining coverage	OECD
Treated fairly at work (perception)	+	Treated fairly at work	ECWS
Dissatisfaction with protection against unacceptable social behaviour (private sector)	-	Protection against unacc. soc. behaviour (private)	Researcher Survey

AUSTRIA

Legend: Widening | Non-Widening | Country Value

Category	Indicator	
Context	R&D expenditure per capita	
	Researchers per 1.000 of population	
	Satisfaction with research funding	
	Growth PhD graduates vs. R&D expenditures	
Temporal	Fixed-term contracts (academic sector)	↔
	Fixed-term contracts (private sector)	↔
	Fixed-term contracts below 35 (academic)	↔
	Part-time contracts (academic)	↔
	Part-time contracts (private)	↔
	Part-time contracts	↔
Organisational	Research autonomy (academic)	
	Teaching vs. research (academic)	
	Work intensity (deadlines)	↔
	Work intensity (10 hour workdays)	↔
Economic	Researchers without contract (academic)	↔
	R1 researchers without contract (academic)	↔
	Yearly net salary	
	Relation to average economy-wide salary	
	Yearly net salary (academic, R1&2)	
	Yearly net salary (academic, R3&4)	
	Yearly net salary (private, R1&2)	
	Yearly net salary (private, R3&4)	
	Additional income sources	
	Perception of remuneration	↔
	Perception of remuneration (academic vs. private)	↔
	Dissatisfaction with remuneration (private)	↔
	Dissatisfaction with salary progression (private)	↔
	Satisfaction with job security (academic)	
	Satisfaction with pension plan (academic)	
	Satisfaction with social security (academic)	
Career	Quality of training and education (academic)	
	Training and development (private - dissatis.)	↔
	Career progression – time to R3 (academic)	↔
	Satisfaction with career perspectives (academic)	
	Transparent and clear-cut career paths	
	Merit-based career progression	
	Tenure based on merit	
	Research assessment (private, dissatisf.)	↔
	Confidence in career (academic)	
	Forced international mobility	↔
	Share of R1&R2 (academic) - shape of pyramid	↔
Social	Regulations on hiring fixed-term workers	
	Collective bargaining coverage	
	Treated fairly at work	
	Protection against unacc. soc. Behaviour	↔

<-> indicates inverted value, so that values to the right indicate generally „better".

BELGIUM

Widening Non-Widening Country Value

Context
- R&D expenditure per capita — RO … SE
- Researchers per 1.000 of population — RO … DK
- Satisfaction with research funding — RO … LU
- Growth PhD graduates vs. R&D expenditures — LU … RO

Temporal
- Fixed-term contracts (academic sector) ↔ — SK … RO
- Fixed-term contracts (private sector) ↔ — SK
- Fixed-term contracts below 35 (academic) ↔ — DE … MT
- Part-time contracts (academic) ↔ — LV … IT
- Part-time contracts (private) ↔ — EL
- Part-time contracts ↔ — LV … PT

Organisational
- Research autonomy (academic) — RO … NL
- Teaching vs. research (academic) — PT … LU
- Work intensity (deadlines) ↔ — CY … LT
- Work intensity (10 hour workdays) ↔ — DK … PL

Economic
- Researchers without contract (academic) ↔ — SK … SI
- R1 researchers without contract (academic) ↔ — PL … DE
- Yearly net salary — BG … DE
- Relation to average economy-wide salary — IE … LT
- Yearly net salary (academic, R1&2) — BG … LU
- Yearly net salary (academic, R3&4) — BG … CY
- Yearly net salary (private, R1&2) — BG … DE
- Yearly net salary (private, R3&4) — MT
- Additional income sources — MT … HU
- Perception of remuneration ↔ — EL … LU
- Perception of remuneration (academic vs. private) ↔ — FR … RO
- Dissatisfaction with remuneration (private) ↔ — EL
- Dissatisfaction with salary progression (private) ↔ — SK
- Satisfaction with job security (academic) — LT … RO
- Satisfaction with pension plan (academic) — EL … NL
- Satisfaction with social security (academic) — EL … LU

Career
- Quality of training and education (academic) — HR … FI
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔ — AT … RO
- Satisfaction with career perspectives (academic) — PT … SI
- Transparent and clear-cut career paths — PT … RO
- Merit-based career progression — PT … RO
- Tenure based on merit — PT … RO
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) — IT … MT
- Forced international mobility ↔ — SI … CY
- Share of R1&R2 (academic) - shape of pyramid ↔ — LU … EL

Social
- Regulations on hiring fixed-term workers — LU
- Collective bargaining coverage — LT … FR
- Treated fairly at work — SK … IE
- Protection against unacc. soc. Behaviour ↔ — HR

-2   -1   0   1   2

<-> indicates inverted value, so that values to the right indicate generally „better".

Widening   Non-Widening   Country Value

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
- Protection against unacc. soc. Behaviour ↔

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CROATIA

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita — RO ... SE
- Researchers per 1.000 of population — RO ... DK
- Satisfaction with research funding — RO ... LU
- Growth PhD graduates vs. R&D expenditures — LU ... RO

Temporal
- Fixed-term contracts (academic sector) — SK ... RO ↔
- Fixed-term contracts (private sector) — SK ↔
- Fixed-term contracts below 35 (academic) — DE ... MT ↔
- Part-time contracts (academic) — LV ... IT ↔
- Part-time contracts (private) — EL ↔
- Part-time contracts — LV ... PT ↔

Organisational
- Research autonomy (academic) — RO ... NL
- Teaching vs. research (academic) — PT ... LU
- Work intensity (deadlines) — CY ... LT ↔
- Work intensity (10 hour workdays) — DK ... PL ↔

Economic
- Researchers without contract (academic) — SK ... SI ↔
- R1 researchers without contract (academic) — PL ... DE ↔
- Yearly net salary — BG ... DE
- Relation to average economy-wide salary — IE ... LT
- Yearly net salary (academic, R1&2) — BG ... LU
- Yearly net salary (academic, R3&4) — BG ... CY
- Yearly net salary (private, R1&2) — BG ... DE
- Yearly net salary (private, R3&4) — ... MT
- Additional income sources — MT ... HU
- Perception of remuneration — EL ... LU ↔
- Perception of remuneration (academic vs. private) — FR ... RO ↔
- Dissatisfaction with remuneration (private) — EL ↔
- Dissatisfaction with salary progression (private) — SK ↔
- Satisfaction with job security (academic) — LT ... RO
- Satisfaction with pension plan (academic) — EL ... NL
- Satisfaction with social security (academic) — EL ... LU

Career
- Quality of training and education (academic) — HR ... FI
- Training and development (private - dissatis.) — ↔
- Career progression – time to R3 (academic) — AT ... RO ↔
- Satisfaction with career perspectives (academic) — PT ... SI
- Transparent and clear-cut career paths — PT ... RO
- Merit-based career progression — PT ... RO
- Tenure based on merit — PT ... RO
- Research assessment (private, dissatisf.) — ↔
- Confidence in career (academic) — IT ... MT
- Forced international mobility — SI ... CY ↔
- Share of R1&R2 (academic) - shape of pyramid — LU ... EL ↔

Social
- Regulations on hiring fixed-term workers — ... LU
- Collective bargaining coverage — LT ... FR
- Treated fairly at work — SK ... IE
- Protection against unacc. soc. Behaviour — HR ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

CYPRUS

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) (SK ... RO) ↔
- Fixed-term contracts (private sector) (SK) ↔
- Fixed-term contracts below 35 (academic) (DE ... MT) ↔
- Part-time contracts (academic) (LV ... IT) ↔
- Part-time contracts (private) (EL) ↔
- Part-time contracts (LV ... PT) ↔

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) (CY ... LT) ↔
- Work intensity (10 hour workdays) (DK ... PL) ↔

Economic
- Researchers without contract (academic) (SK ... SI) ↔
- R1 researchers without contract (academic) (PL ... DE) ↔
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (MT)
- Additional income sources (MT ... HU)
- Perception of remuneration (EL ... LU) ↔
- Perception of remuneration (academic vs. private) (FR ... RO) ↔
- Dissatisfaction with remuneration (private) (EL) ↔
- Dissatisfaction with salary progression (private) (SK) ↔
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) (AT ... RO) ↔
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility (SI ... CY) ↔
- Share of R1&R2 (academic) - shape of pyramid (LU ... EL) ↔

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour (HR) ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

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CZECH REPUBLIC

Widening	Non-Widening	Country Value

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
- Protection against unacc. soc. Behaviour ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

DENMARK

Legend: **Widening** | **Non-Widening** | **Country Value**

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
- Protection against unacc. soc. Behaviour ↔

Axis labels: -2, -1, 0, 1, 2

<-> indicates inverted value, so that values to the right indicate generally „better".

ESTONIA

FINLAND

<-> indicates inverted value, so that values to the right indicate generally „better".

FRANCE

<-> indicates inverted value, so that values to the right indicate generally „better".

Widening   Non-Widening   Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) (SK ... RO) ↔
- Fixed-term contracts (private sector) (SK) ↔
- Fixed-term contracts below 35 (academic) (DE ... MT) ↔
- Part-time contracts (academic) (LV ... IT) ↔
- Part-time contracts (private) (EL) ↔
- Part-time contracts (LV ... PT) ↔

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) (CY ... LT) ↔
- Work intensity (10 hour workdays) (DK ... PL) ↔

Economic
- Researchers without contract (academic) (SK ... SI) ↔
- R1 researchers without contract (academic) (PL ... DE) ↔
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (MT)
- Additional income sources (MT ... HU)
- Perception of remuneration (EL ... LU) ↔
- Perception of remuneration (academic vs. private) (FR ... RO) ↔
- Dissatisfaction with remuneration (private) (EL) ↔
- Dissatisfaction with salary progression (private) (SK) ↔
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) (AT ... RO) ↔
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility (SI ... CY) ↔
- Share of R1&R2 (academic) - shape of pyramid (LU ... EL) ↔

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour (HR) ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

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GREECE

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) (SK ... RO) ↔
- Fixed-term contracts (private sector) (SK) ↔
- Fixed-term contracts below 35 (academic) (DE ... MT) ↔
- Part-time contracts (academic) (LV ... IT) ↔
- Part-time contracts (private) (EL) ↔
- Part-time contracts (LV ... PT) ↔

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) (CY ... LT) ↔
- Work intensity (10 hour workdays) (DK ... PL) ↔

Economic
- Researchers without contract (academic) (SK ... SI) ↔
- R1 researchers without contract (academic) (PL ... DE) ↔
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (MT)
- Additional income sources (MT ... HU)
- Perception of remuneration (EL ... LU) ↔
- Perception of remuneration (academic vs. private) (FR ... RO) ↔
- Dissatisfaction with remuneration (private) (EL) ↔
- Dissatisfaction with salary progression (private) (SK) ↔
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) (AT ... RO) ↔
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility (SI ... CY) ↔
- Share of R1&R2 (academic) - shape of pyramid (LU ... EL) ↔

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
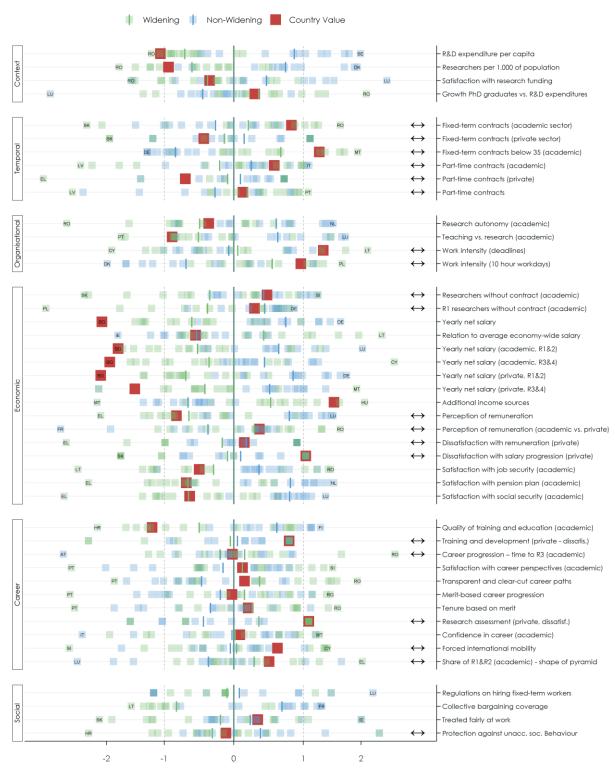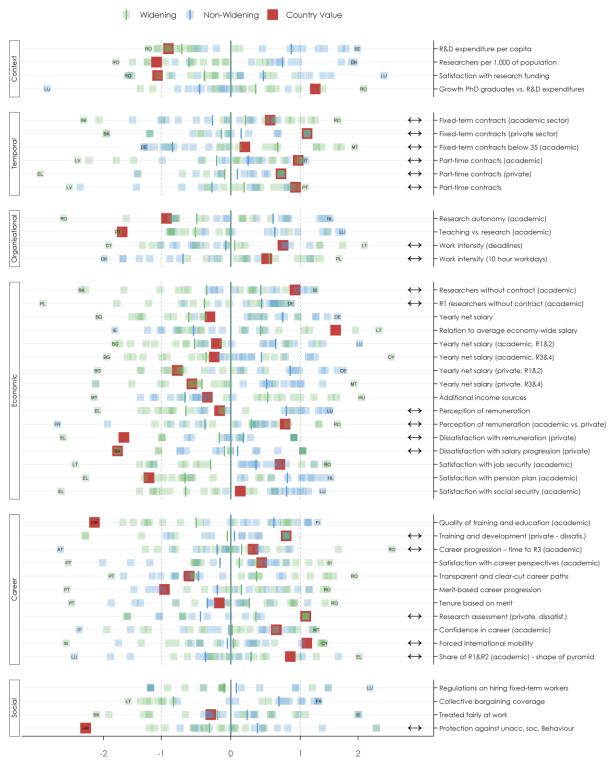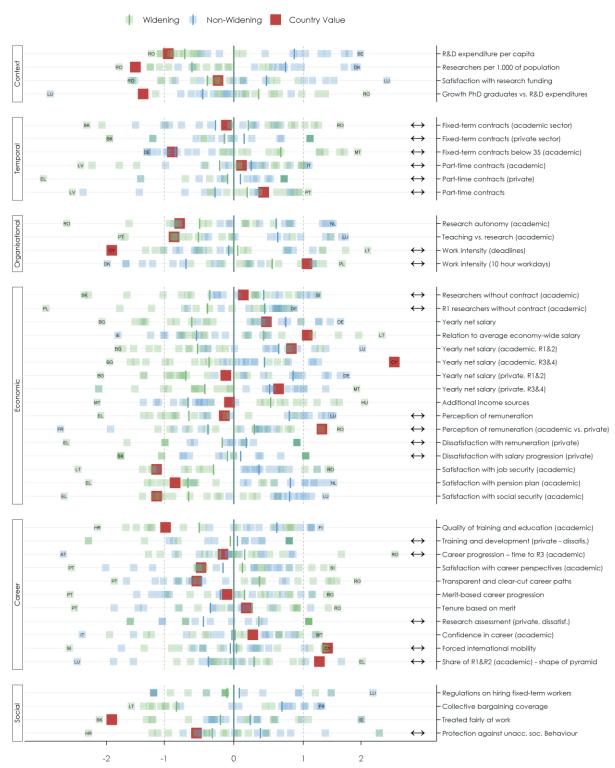- Protection against unacc. soc. Behaviour (HR) ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

HUNGARY

<-> indicates inverted value, so that values to the right indicate generally „better".

IRELAND

ITALY

<-> indicates inverted value, so that values to the right indicate generally „better".

LATVIA

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) (SK ... RO) ↔
- Fixed-term contracts (private sector) (SK) ↔
- Fixed-term contracts below 35 (academic) (DE ... MT) ↔
- Part-time contracts (academic) (LV ... IT) ↔
- Part-time contracts (private) (EL) ↔
- Part-time contracts (LV ... PT) ↔

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) (CY ... LT) ↔
- Work intensity (10 hour workdays) (DK ... PL) ↔

Economic
- Researchers without contract (academic) (SK ... SI) ↔
- R1 researchers without contract (academic) (PL ... DE) ↔
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (BG ... MT)
- Additional income sources (MT ... HU)
- Perception of remuneration (EL ... LU) ↔
- Perception of remuneration (academic vs. private) (FR ... RO) ↔
- Dissatisfaction with remuneration (private) (EL) ↔
- Dissatisfaction with salary progression (private) (SK) ↔
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) (AT ... RO) ↔
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility (SI ... CY) ↔
- Share of R1&R2 (academic) - shape of pyramid (LU ... EL) ↔

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour (HR) ↔

x-axis: -2, -1, 0, 1, 2

<-> indicates inverted value, so that values to the right indicate generally „better".

LITHUANIA

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) ↔ (SK ... RO)
- Fixed-term contracts (private sector) ↔ (SK)
- Fixed-term contracts below 35 (academic) ↔ (DE ... MT)
- Part-time contracts (academic) ↔ (LV ... IT)
- Part-time contracts (private) ↔ (EL)
- Part-time contracts ↔ (LV ... PT)

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) ↔ (CY ... LT)
- Work intensity (10 hour workdays) ↔ (DK ... PL)

Economic
- Researchers without contract (academic) ↔ (SK ... SI)
- R1 researchers without contract (academic) ↔ (PL ... DE)
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (... MT)
- Additional income sources (MT ... HU)
- Perception of remuneration ↔ (EL ... LU)
- Perception of remuneration (academic vs. private) ↔ (FR ... RO)
- Dissatisfaction with remuneration (private) ↔ (EL)
- Dissatisfaction with salary progression (private) ↔ (SK)
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔ (AT ... RO)
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility ↔ (SI ... CY)
- Share of R1&R2 (academic) - shape of pyramid ↔ (LU ... EL)

Social
- Regulations on hiring fixed-term workers (... LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour ↔ (HR)

Axis: -2, -1, 0, 1, 2

<-> indicates inverted value, so that values to the right indicate generally „better".

LUXEMBOURG

Legend: Widening, Non-Widening, Country Value

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
- Protection against unacc. soc. Behaviour ↔

<-> indicates inverted value, so that values to the right indicate generally „better".

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MALTA

Legend: Widening, Non-Widening, Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) ↔ (SK ... RO)
- Fixed-term contracts (private sector) ↔ (SK)
- Fixed-term contracts below 35 (academic) ↔ (DE ... MT)
- Part-time contracts (academic) ↔ (LV ... IT)
- Part-time contracts (private) ↔ (EL)
- Part-time contracts ↔ (LV ... PT)

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) ↔ (CY ... LT)
- Work intensity (10 hour workdays) ↔ (DK ... PL)

Economic
- Researchers without contract (academic) ↔ (SK ... SI)
- R1 researchers without contract (academic) ↔ (PL ... DE)
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (MT)
- Additional income sources (MT ... HU)
- Perception of remuneration ↔ (EL ... LU)
- Perception of remuneration (academic vs. private) ↔ (FR ... RO)
- Dissatisfaction with remuneration (private) ↔ (EL)
- Dissatisfaction with salary progression (private) ↔ (SK)
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔ (AT ... RO)
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility ↔ (SI ... CY)
- Share of R1&R2 (academic) - shape of pyramid ↔ (LU ... EL)

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour ↔ (HR)

<-> indicates inverted value, so that values to the right indicate generally „better".

NETHERLANDS

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) (SK ... RO) ↔
- Fixed-term contracts (private sector) (SK) ↔
- Fixed-term contracts below 35 (academic) (DE ... MT) ↔
- Part-time contracts (academic) (LV ... IT) ↔
- Part-time contracts (private) (EL) ↔
- Part-time contracts (LV ... PT) ↔

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) (CY ... LT) ↔
- Work intensity (10 hour workdays) (DK ... PL) ↔

Economic
- Researchers without contract (academic) (SK ... SI) ↔
- R1 researchers without contract (academic) (PL ... DE) ↔
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (BG ... MT)
- Additional income sources (MT ... HU)
- Perception of remuneration (EL ... LU) ↔
- Perception of remuneration (academic vs. private) (FR ... RO) ↔
- Dissatisfaction with remuneration (private) (EL) ↔
- Dissatisfaction with salary progression (private) (SK) ↔
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) (AT ... RO) ↔
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility (SI ... CY) ↔
- Share of R1&R2 (academic) - shape of pyramid (LU ... EL) ↔

Social
- Regulations on hiring fixed-term workers (... LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour (HR) ↔
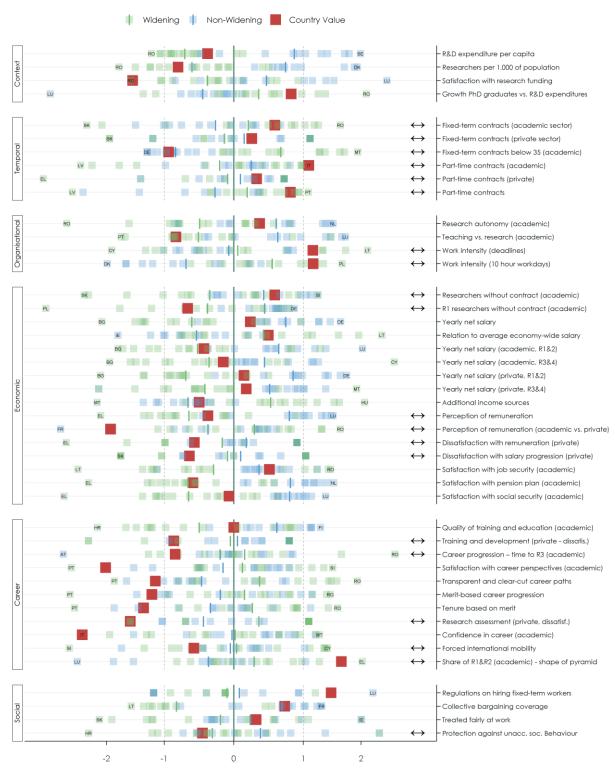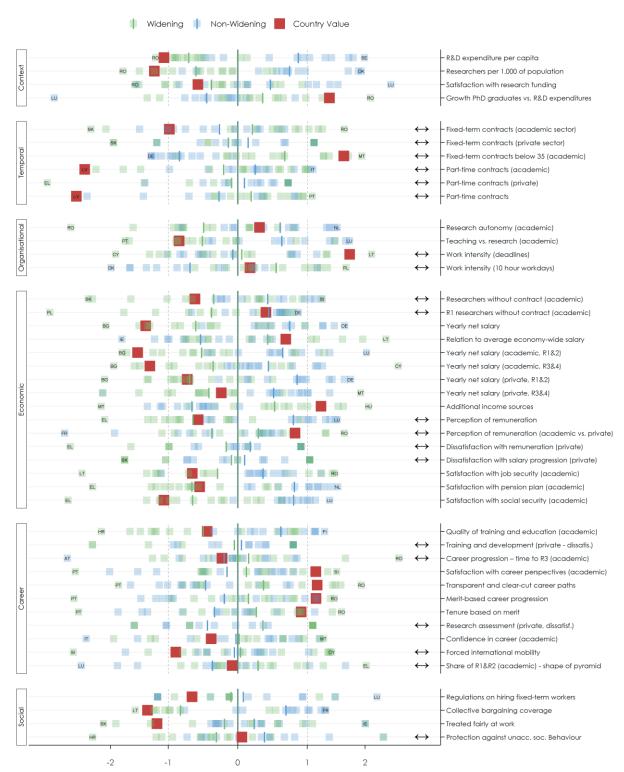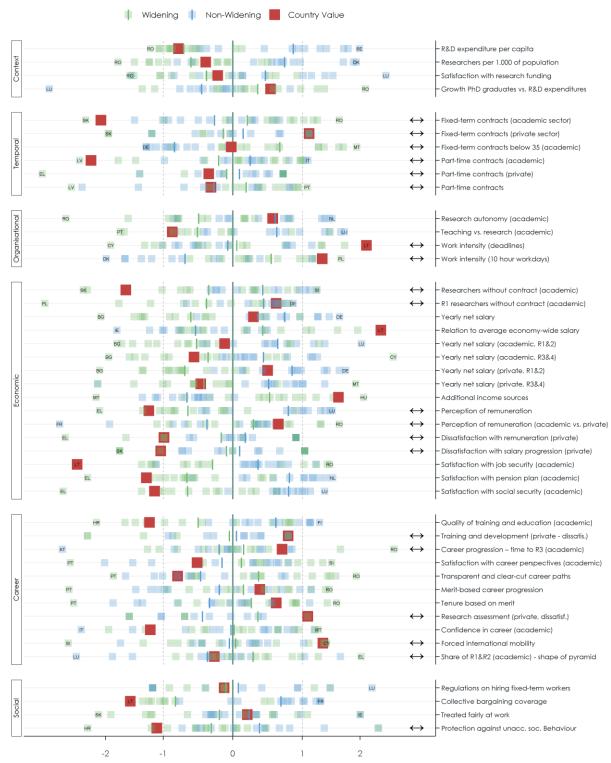
<-> indicates inverted value, so that values to the right indicate generally „better".

POLAND

<-> indicates inverted value, so that values to the right indicate generally „better".

PORTUGAL

| Legend: | Widening | Non-Widening | Country Value |

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
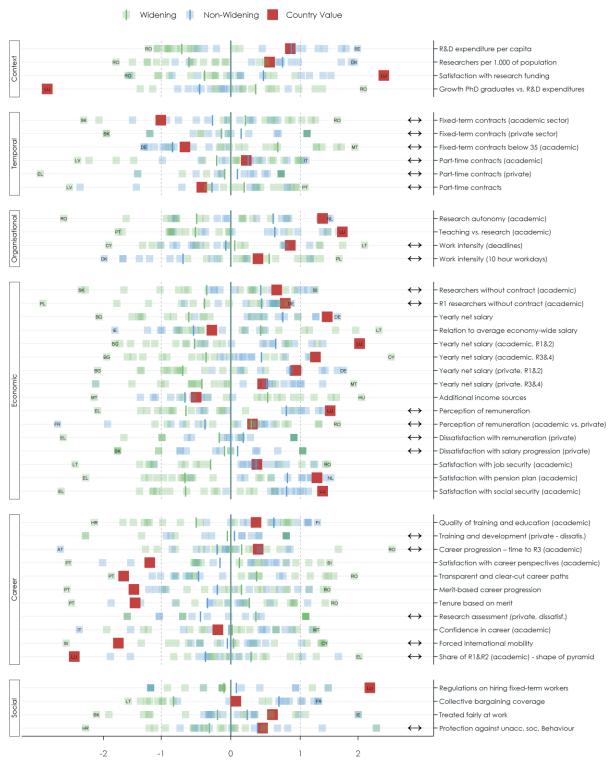- Protection against unacc. soc. Behaviour ↔
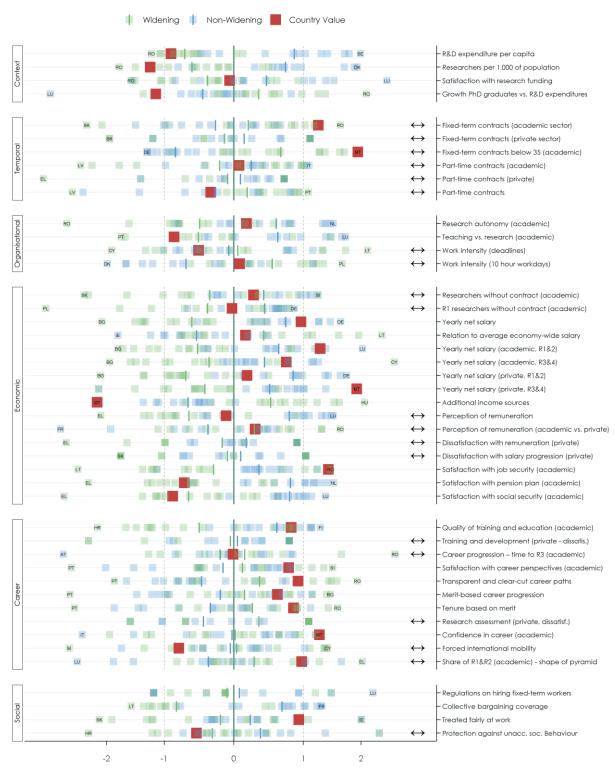
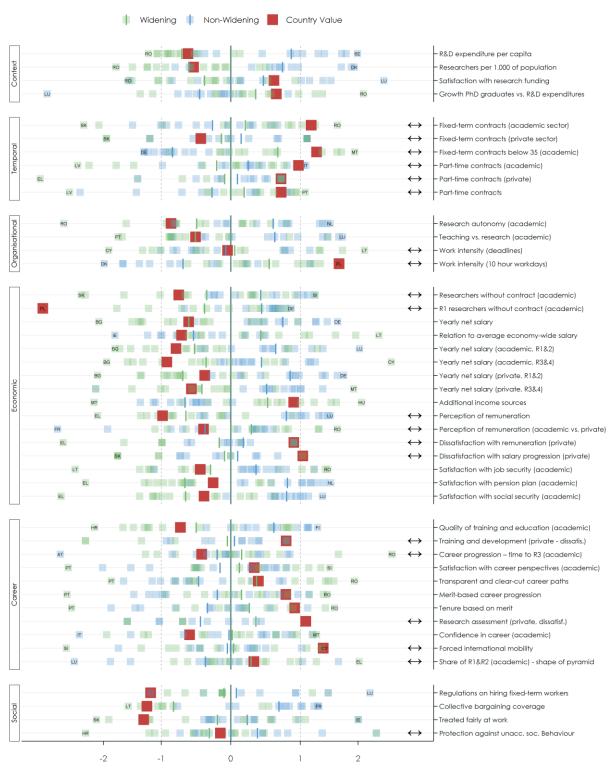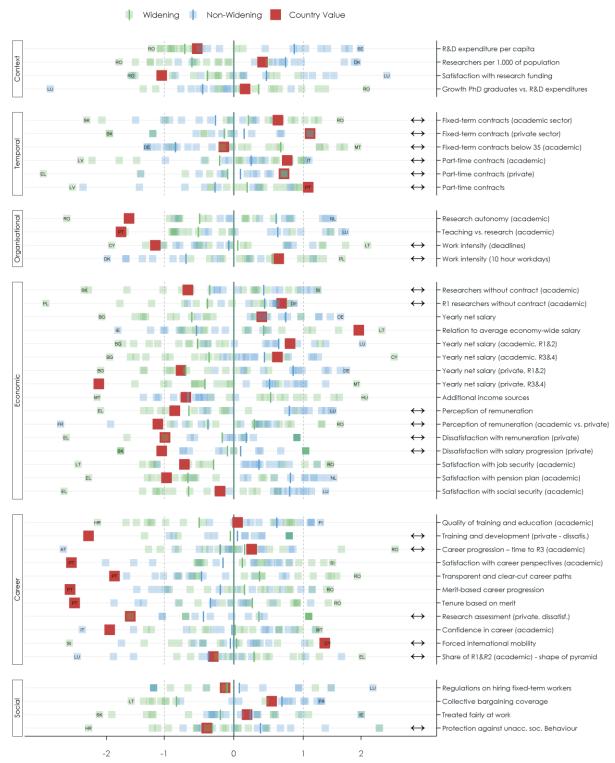<-> indicates inverted value, so that values to the right indicate generally „better".

ROMANIA

<-> indicates inverted value, so that values to the right indicate generally „better".

SLOVAKIA

Legend: Widening | Non-Widening | ■ Country Value

Context
- R&D expenditure per capita — RO ... SE
- Researchers per 1.000 of population — RO ... DK
- Satisfaction with research funding — RO ... LU
- Growth PhD graduates vs. R&D expenditures — LU ... RO

Temporal
- Fixed-term contracts (academic sector) — SK ... RO ↔
- Fixed-term contracts (private sector) — SK ↔
- Fixed-term contracts below 35 (academic) — DE ... MT ↔
- Part-time contracts (academic) — LV ... IT ↔
- Part-time contracts (private) — EL ↔
- Part-time contracts — LV ... PT ↔

Organisational
- Research autonomy (academic) — RO ... NL
- Teaching vs. research (academic) — PT ... LU
- Work intensity (deadlines) — CY ... LT ↔
- Work intensity (10 hour workdays) — DK ... PL ↔

Economic
- Researchers without contract (academic) — SK ... SI ↔
- R1 researchers without contract (academic) — PL ... DE ↔
- Yearly net salary — BG ... DE
- Relation to average economy-wide salary — IE ... LT
- Yearly net salary (academic, R1&2) — BG ... LU
- Yearly net salary (academic, R3&4) — BG ... CY
- Yearly net salary (private, R1&2) — BG ... DE
- Yearly net salary (private, R3&4) — ... MT
- Additional income sources — MT ... HU
- Perception of remuneration — EL ... LU ↔
- Perception of remuneration (academic vs. private) — FR ... RO ↔
- Dissatisfaction with remuneration (private) — EL ↔
- Dissatisfaction with salary progression (private) — SK ↔
- Satisfaction with job security (academic) — LT ... RO
- Satisfaction with pension plan (academic) — EL ... NL
- Satisfaction with social security (academic) — EL ... LU

Career
- Quality of training and education (academic) — HR ... FI
- Training and development (private - dissatis.) — ↔
- Career progression – time to R3 (academic) — AT ... RO ↔
- Satisfaction with career perspectives (academic) — PT ... SI
- Transparent and clear-cut career paths — PT ... RO
- Merit-based career progression — PT ... RO
- Tenure based on merit — PT ... RO
- Research assessment (private, dissatisf.) — ↔
- Confidence in career (academic) — IT ... MT
- Forced international mobility — SI ... CY ↔
- Share of R1&R2 (academic) - shape of pyramid — LU ... EL ↔

Social
- Regulations on hiring fixed-term workers — ... LU
- Collective bargaining coverage — LT ... FR
- Treated fairly at work — SK ... IE
- Protection against unacc. soc. Behaviour — HR ↔

Axis: -2, -1, 0, 1, 2

<-> indicates inverted value, so that values to the right indicate generally „better".

SLOVENIA

Widening Non-Widening Country Value

Context
- R&D expenditure per capita
- Researchers per 1.000 of population
- Satisfaction with research funding
- Growth PhD graduates vs. R&D expenditures

Temporal
- Fixed-term contracts (academic sector) ↔
- Fixed-term contracts (private sector) ↔
- Fixed-term contracts below 35 (academic) ↔
- Part-time contracts (academic) ↔
- Part-time contracts (private) ↔
- Part-time contracts ↔

Organisational
- Research autonomy (academic)
- Teaching vs. research (academic)
- Work intensity (deadlines) ↔
- Work intensity (10 hour workdays) ↔

Economic
- Researchers without contract (academic) ↔
- R1 researchers without contract (academic) ↔
- Yearly net salary
- Relation to average economy-wide salary
- Yearly net salary (academic, R1&2)
- Yearly net salary (academic, R3&4)
- Yearly net salary (private, R1&2)
- Yearly net salary (private, R3&4)
- Additional income sources
- Perception of remuneration ↔
- Perception of remuneration (academic vs. private) ↔
- Dissatisfaction with remuneration (private) ↔
- Dissatisfaction with salary progression (private) ↔
- Satisfaction with job security (academic)
- Satisfaction with pension plan (academic)
- Satisfaction with social security (academic)

Career
- Quality of training and education (academic)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔
- Satisfaction with career perspectives (academic)
- Transparent and clear-cut career paths
- Merit-based career progression
- Tenure based on merit
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic)
- Forced international mobility ↔
- Share of R1&R2 (academic) - shape of pyramid ↔

Social
- Regulations on hiring fixed-term workers
- Collective bargaining coverage
- Treated fairly at work
- Protection against unacc. soc. Behaviour ↔
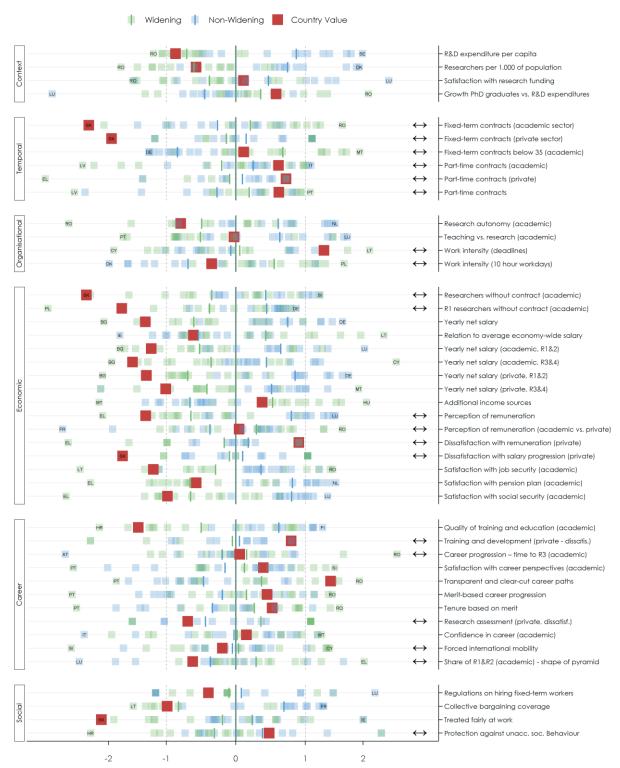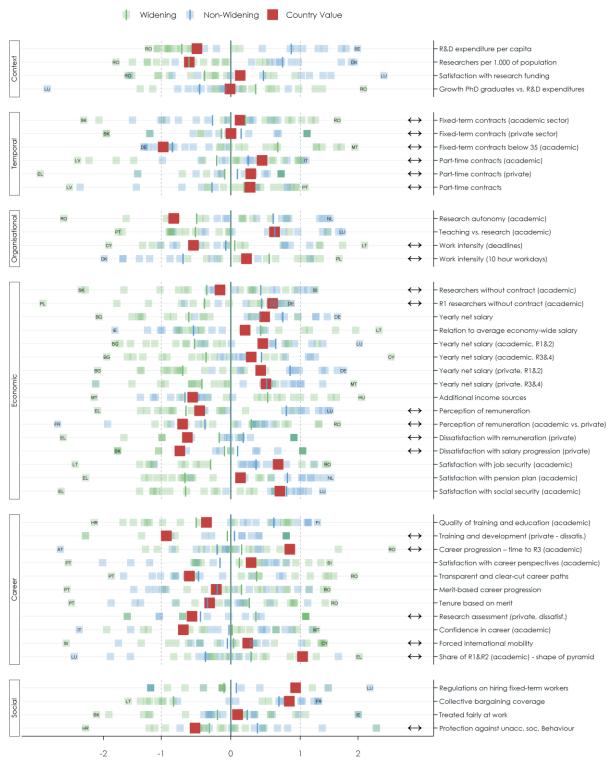
-2   -1   0   1   2

<-> indicates inverted value, so that values to the right indicate generally „better".

SPAIN

<-> indicates inverted value, so that values to the right indicate generally „better".

Legend: Widening | Non-Widening | Country Value

Context
- R&D expenditure per capita (RO ... SE)
- Researchers per 1.000 of population (RO ... DK)
- Satisfaction with research funding (RO ... LU)
- Growth PhD graduates vs. R&D expenditures (LU ... RO)

Temporal
- Fixed-term contracts (academic sector) ↔ (SK ... RO)
- Fixed-term contracts (private sector) ↔ (SK)
- Fixed-term contracts below 35 (academic) ↔ (DE ... MT)
- Part-time contracts (academic) ↔ (LV ... IT)
- Part-time contracts (private) ↔ (EL)
- Part-time contracts ↔ (LV ... PT)

Organisational
- Research autonomy (academic) (RO ... NL)
- Teaching vs. research (academic) (PT ... LU)
- Work intensity (deadlines) ↔ (CY ... LT)
- Work intensity (10 hour workdays) ↔ (DK ... PL)

Economic
- Researchers without contract (academic) ↔ (SK ... SI)
- R1 researchers without contract (academic) ↔ (PL ... DE)
- Yearly net salary (BG ... DE)
- Relation to average economy-wide salary (IE ... LT)
- Yearly net salary (academic, R1&2) (BG ... LU)
- Yearly net salary (academic, R3&4) (BG ... CY)
- Yearly net salary (private, R1&2) (BG ... DE)
- Yearly net salary (private, R3&4) (MT)
- Additional income sources (MT ... HU)
- Perception of remuneration ↔ (EL ... LU)
- Perception of remuneration (academic vs. private) ↔ (FR ... RO)
- Dissatisfaction with remuneration (private) ↔ (EL)
- Dissatisfaction with salary progression (private) ↔ (SK)
- Satisfaction with job security (academic) (LT ... RO)
- Satisfaction with pension plan (academic) (EL ... NL)
- Satisfaction with social security (academic) (EL ... LU)

Career
- Quality of training and education (academic) (HR ... FI)
- Training and development (private - dissatis.) ↔
- Career progression – time to R3 (academic) ↔ (AT ... RO)
- Satisfaction with career perspectives (academic) (PT ... SI)
- Transparent and clear-cut career paths (PT ... RO)
- Merit-based career progression (PT ... RO)
- Tenure based on merit (PT ... RO)
- Research assessment (private, dissatisf.) ↔
- Confidence in career (academic) (IT ... MT)
- Forced international mobility ↔ (SI ... CY)
- Share of R1&R2 (academic) - shape of pyramid ↔ (LU ... EL)

Social
- Regulations on hiring fixed-term workers (LU)
- Collective bargaining coverage (LT ... FR)
- Treated fairly at work (SK ... IE)
- Protection against unacc. soc. Behaviour ↔ (HR)

<-> indicates inverted value, so that values to the right indicate generally „better".