



INSTITUT FÜR ARBEITSMARKT- UND
BERUFSFORSCHUNG
Die Forschungseinrichtung der Bundesagentur für Arbeit

THE FUTURE OF EMPLOYMENT AS THE BASIS FOR SUSTAINING AND RENEWING SOCIAL SECURITY

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DIGITALISATION: FIRMS EXPECT EXTENSIVE CHANGES



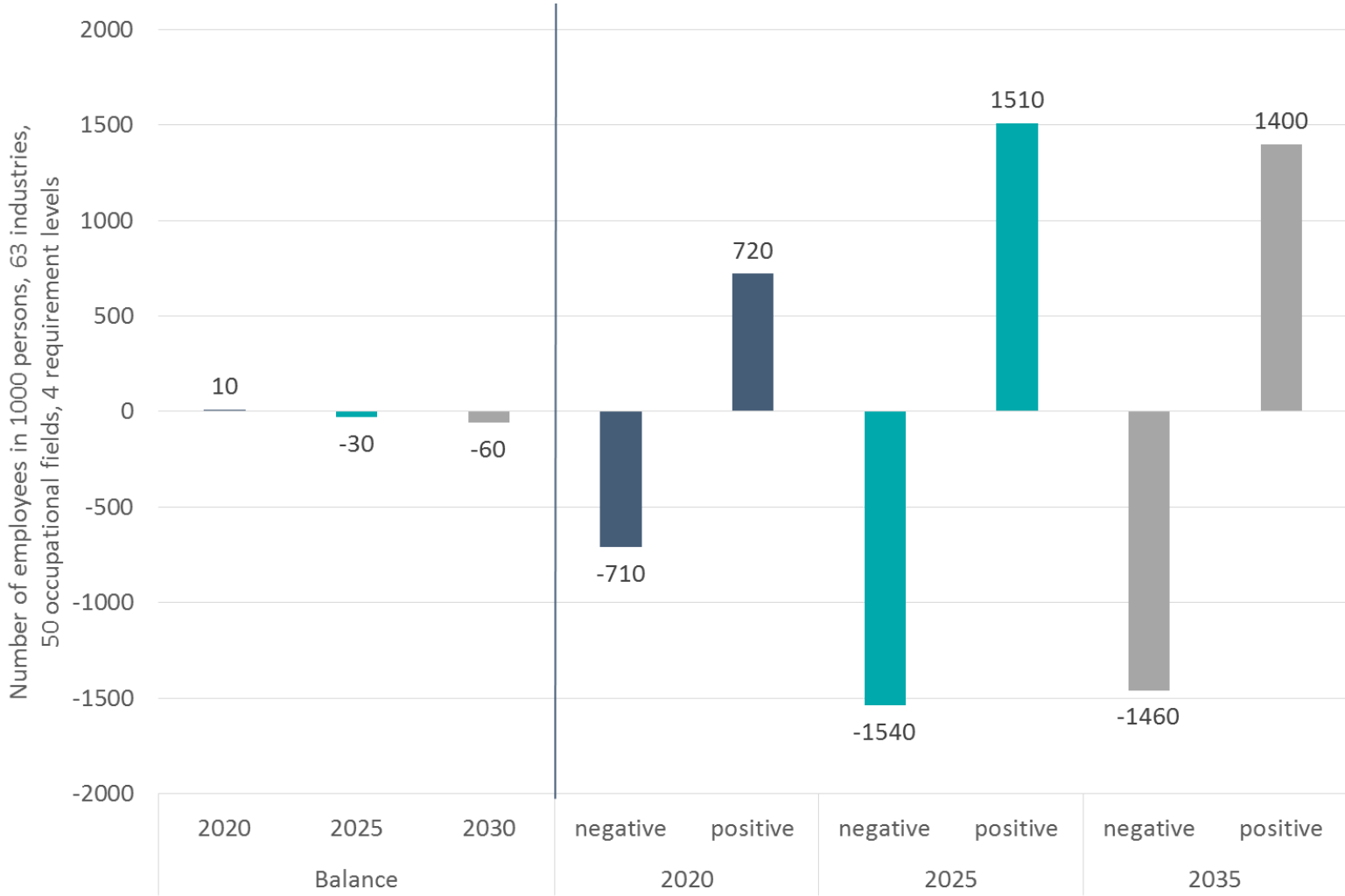
THE MACRO LEVEL



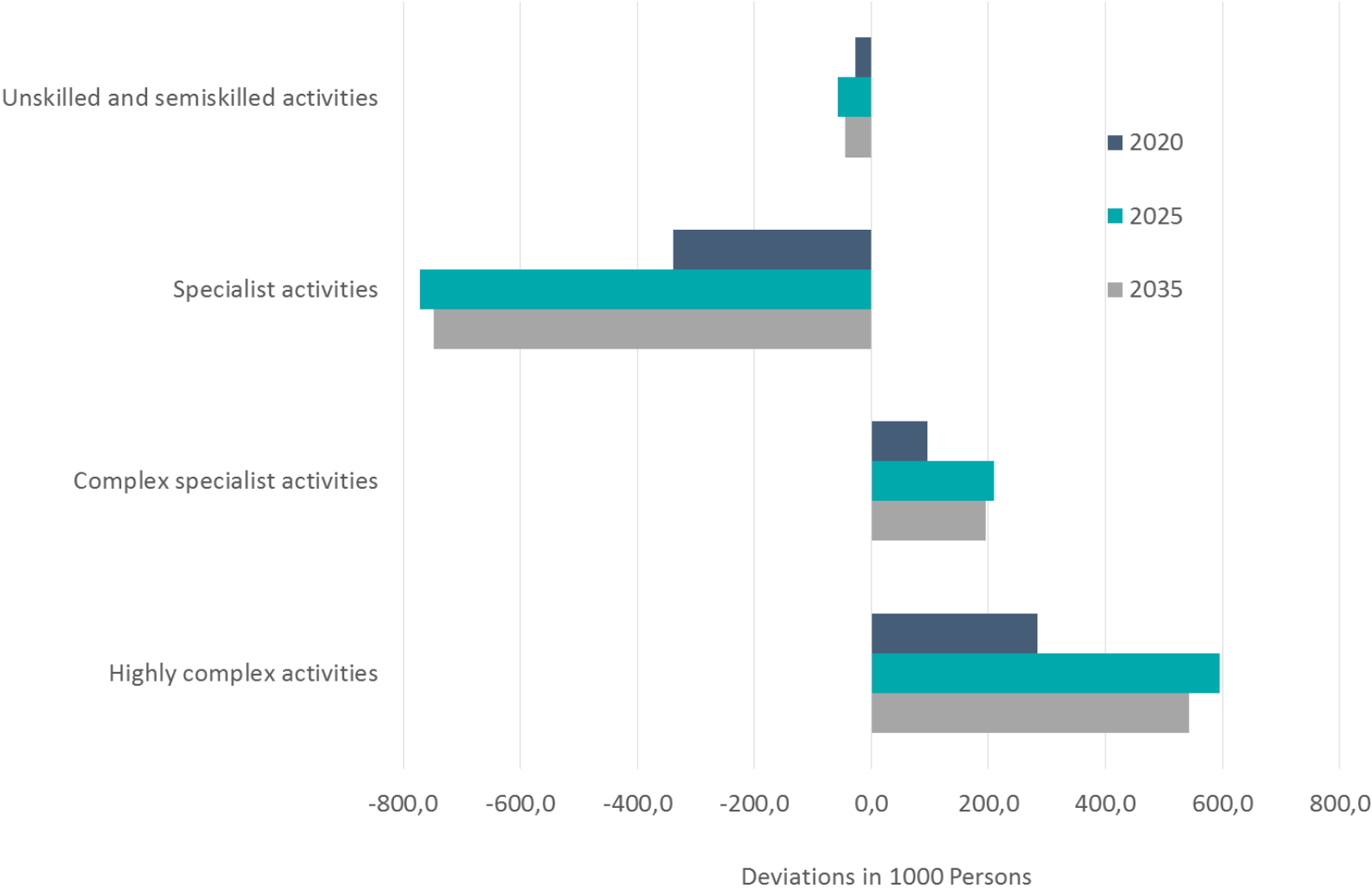
LABOUR & (DIGITAL) TECHNOLOGY: AMBIVALENT RELATION

- Productivity rises, jobs are substituted
- New investment, services, products are created
- Prices react, demand expands
- Income arises and is used
- Tasks change, education develops

DIGITALISATION: LOST AND NEWLY CREATED JOBS IN BALANCE



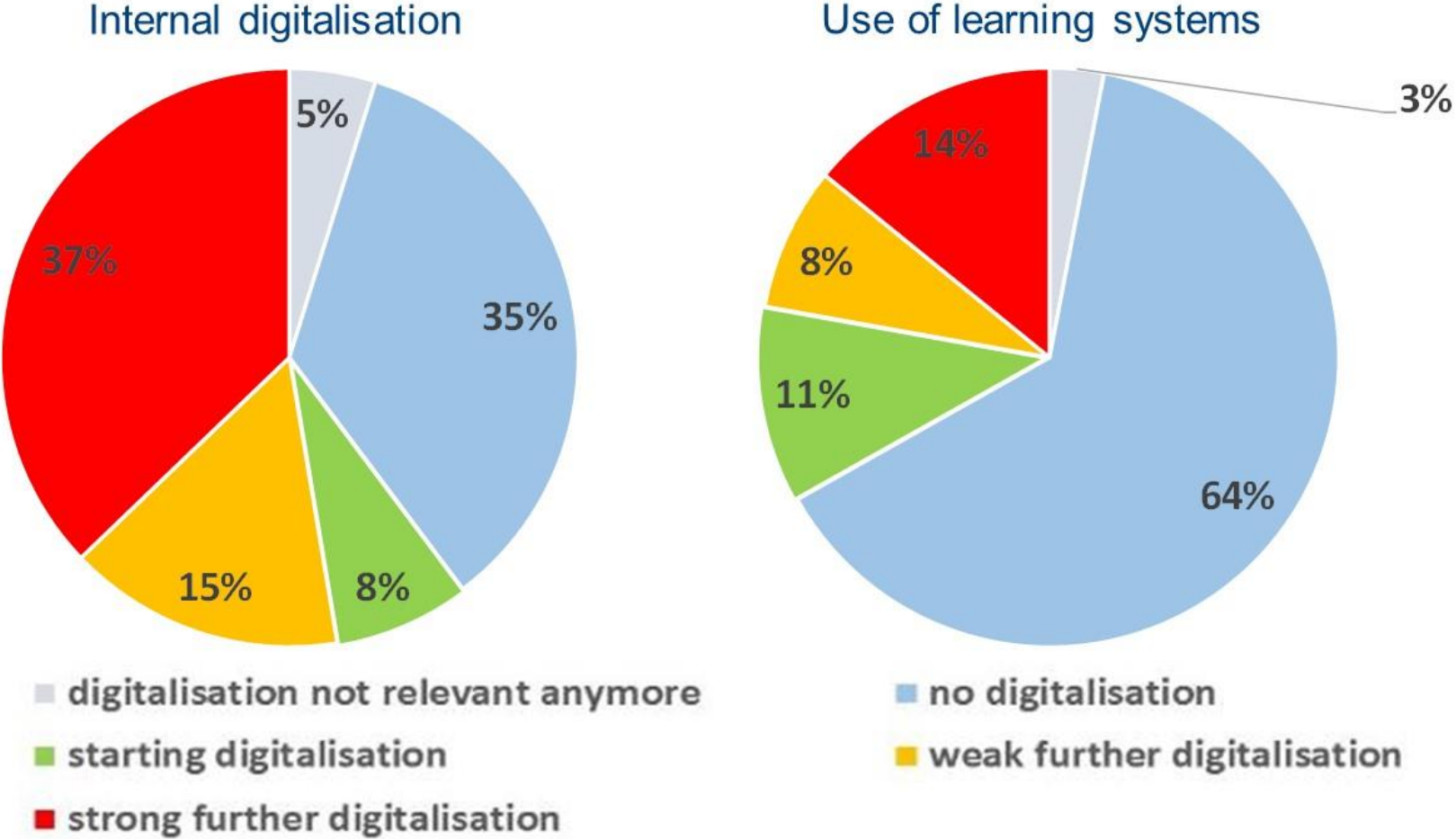
TREND TOWARDS HIGHER REQUIREMENT LEVELS – MIDDLE SKILLS AFFECTED



THE FIRM LEVEL



DIGITALISATION AT THE FIRM LEVEL: UPWARD TRENDS, BUT STRONG HETEROGENEITIES



NOT MORE FIRING THAN HIRING

	Hires per 100 employees	Leavings per 100 employees	Share of terminated search processes	Open job vacancies by 100 employees
Digitalisation - internal				
starting digitalisation	-1,45	-0,99	2,82 ***	1,74 ***
weak further digitalisation	0,59	0,87	1,41 *	1,77 ***
strong further digitalisation	-1,13	-1,09	2,32 ***	1,54 ***
Digitalisation - external				
starting digitalisation	1,45	1,75	-0,06	-0,14
weak further digitalisation	1,58	0,97	-0,43	-1,44 ***
strong further digitalisation	3,20 *	1,18	0,53	0,16
Digitalisation - Use of learning systems				
starting digitalisation	2,41	0,93	-0,63	-0,21
weak further digitalisation	-0,93	-0,41	-1,71 **	0,48
strong further digitalisation	4,30 **	3,07 **	-0,86	-0,39
Total average weighted	13,2	11,8	12,2%	2,6

THE GLOBAL LEVEL

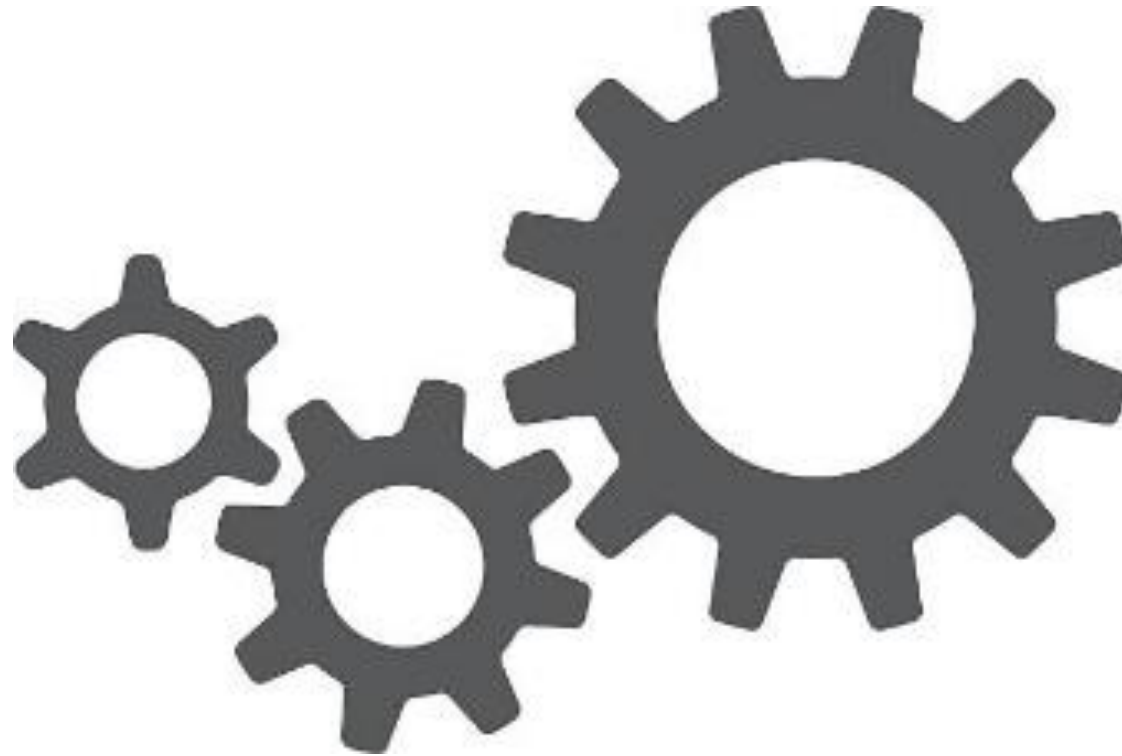


ROBOTER REDUCE JOBS – IN EMERGING COUNTRIES

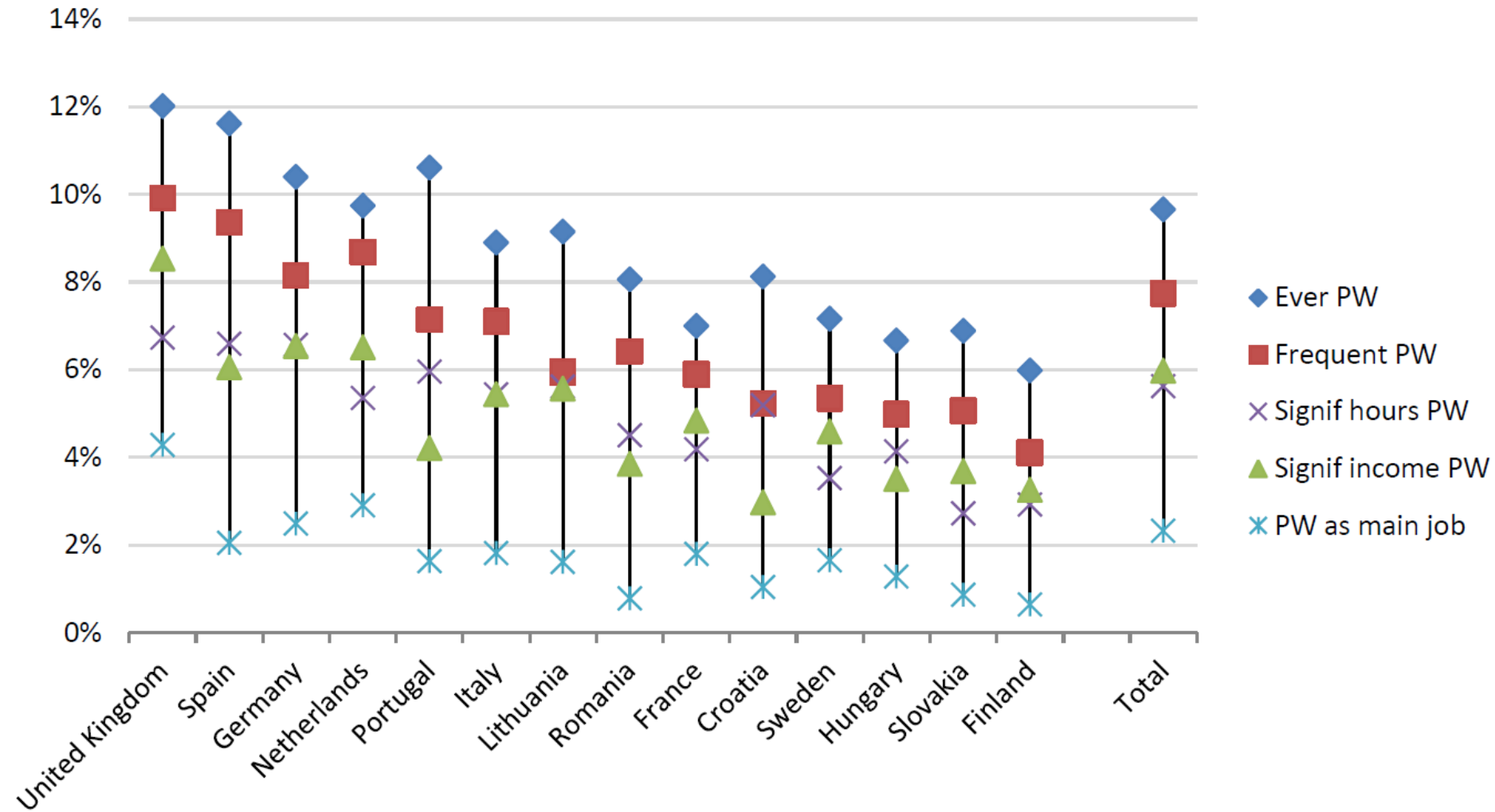
Dependent variable: employment	World		Dev-ep countries		Dev-ing countries	
robot stock	-0.209*** (0.056)	-0.247** (0.125)	-0.024** (0.009)	-0.051** (0.021)	-0.305*** (0.048)	-0.054 (0.456)
robot stock × labour intensity		0.046 (0.098)		0.038 (0.023)		-0.268 (0.469)
labour intensity	-0.014*** (0.005)	-0.029 (0.033)	0.003 (0.003)	-0.004 (0.006)	-0.038*** (0.010)	0.050 (0.159)

- But: Positive spillovers from robots in manufacturing on service sector jobs
- In addition: Robots in developed countries reduce offshoring

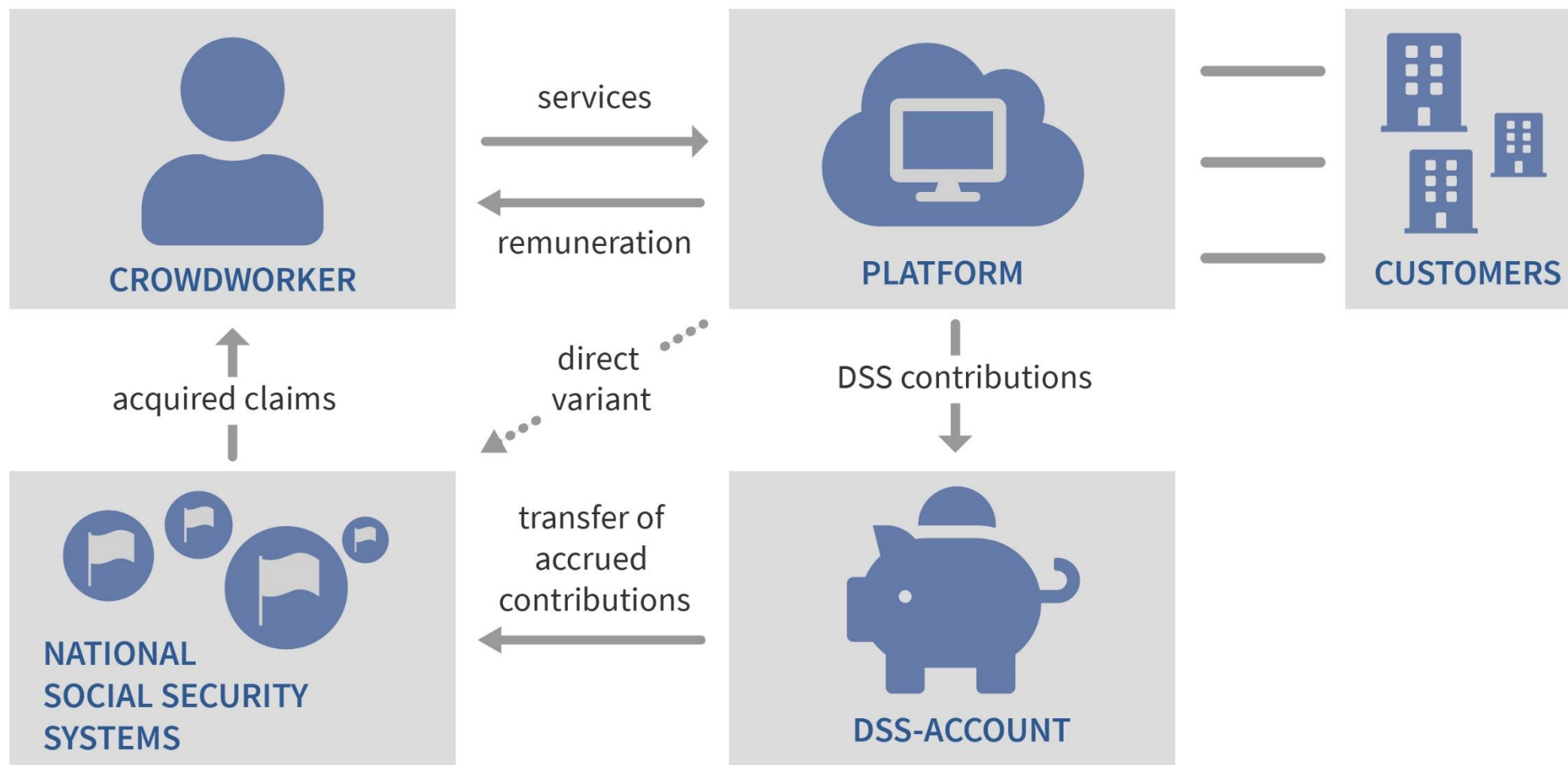
LABOUR MARKETS THEMSELVES ARE DIGITISED



PLATFORM WORK IN EUROPE



DIGITAL SOCIAL SECURITY (DSS)



COVID AND BEYOND

- Employment can remain a sustainable basis for social security.
- Social security has proven its worth in the crisis.

- Non-standard workers at risk:
 - Platform work e.g., DSS
 - Marginal jobs
 - Self-employed e.g., Schoukens/Weber (2020)

THANK YOU!

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