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Encouraging Lifelong Learning for an Inclusive & Vibrant Europe

European Commission

Structural features of participation in E&T: how to get disadvantaged adults on board?

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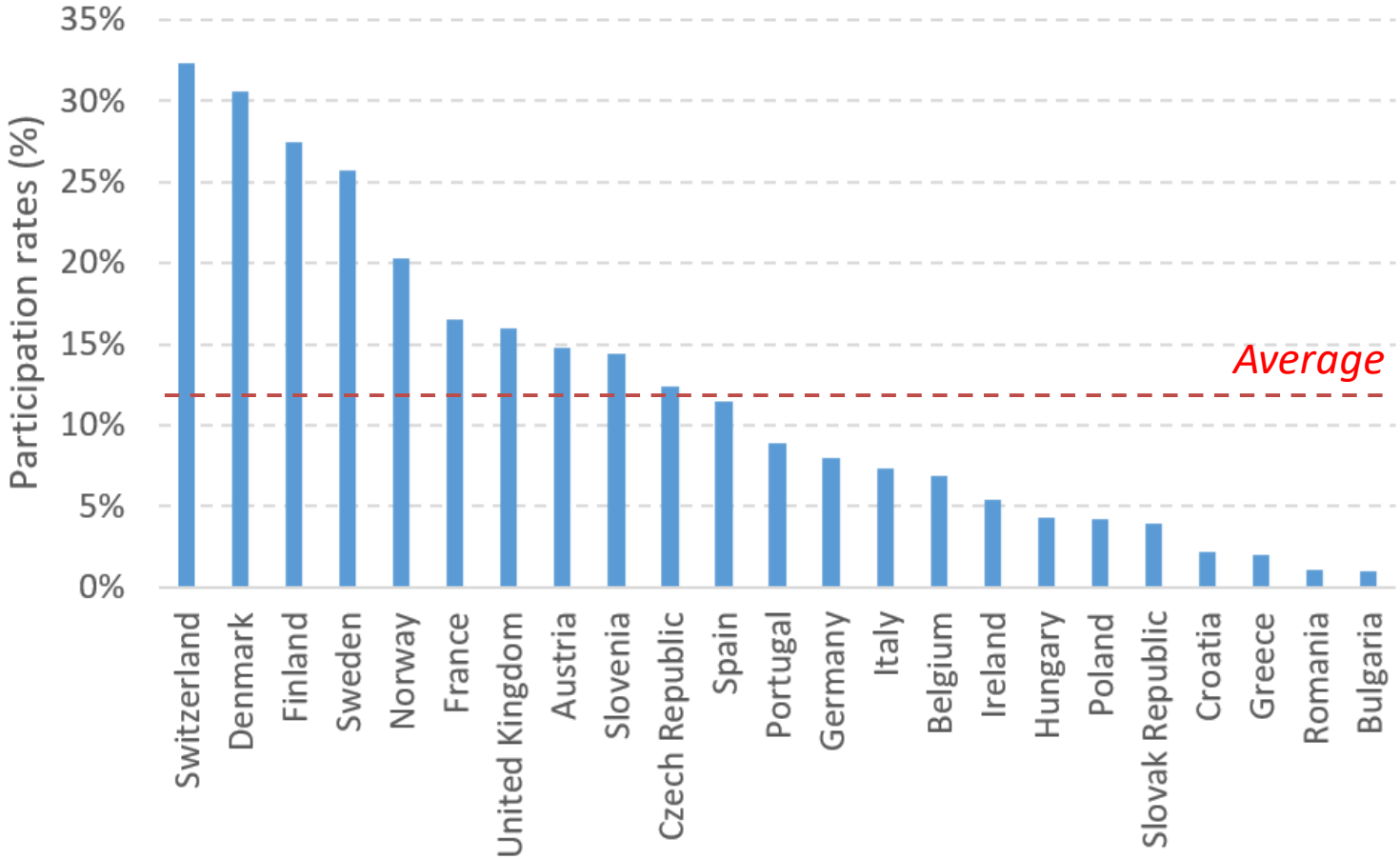
Overview

- Determinants of Participation Rates in Adult E&T
- Inequality in Opportunities for Disadvantaged Adults
- Adult E&T across Job Typologies in the Digital Era

Participation Rates in Adult E&T



Upon looking at the percent share of *employed individuals* aged 20 to 64 in adult E&T, we observe a striking dispersion in the participation rates across European countries.

Source: Own calculations based on EU LFS 2011-2016

Participation Rates in Adult E&T

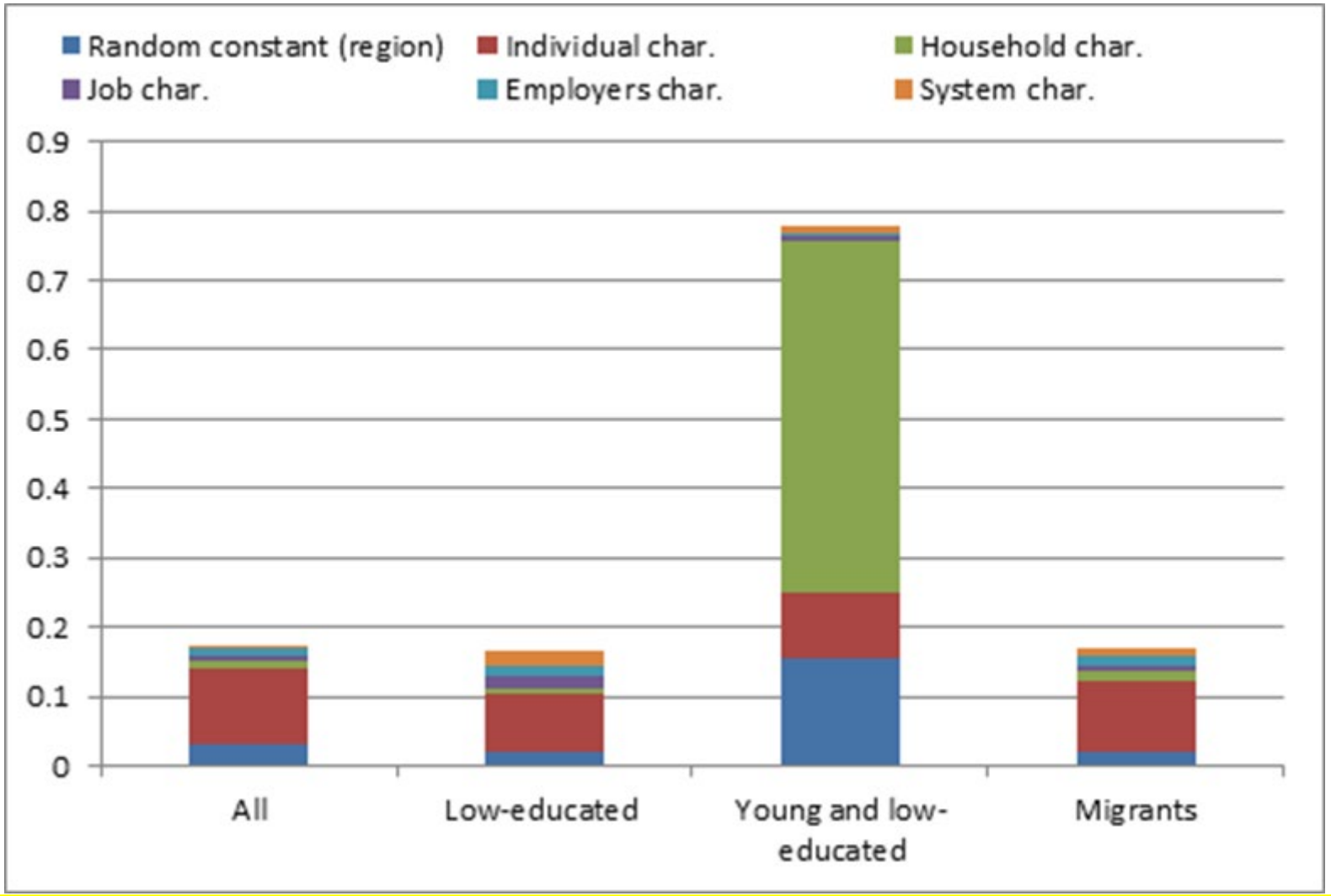
- One likely explanation for this observation is that some countries offer a lot of adult E&T to employees (*supply*), while others lag behind in doing so.
- However, this explanation may falsely lead to the conclusion that all observed variation between countries can be explained by supply differences in adult E&T, and that more supply unambiguously would increase participation rates (X → Y).
  - Who offers courses or training to these employees (*supply*)? Who would pay (*financial system*)?
  - Would all employees participate in this course or training (*demand*)? Regardless of the price of adult learning (*perceived costs*)? And if not, *what is 'the cure'* for such an adult (*interventions*)?
  - Is adult E&T a uniform product, or rather adapted to the needs of the job (*goal and field of learning activity*)?

Participation Rates in Adult E&T

- Literature argues that participation rates may be low, because of…
  - time constraints, owing to family reasons or job-related time allocation (*situational barriers*);
  - the (lack of) provision of adult E&T, and who pays for it (*institutional barriers*);
  - the psychological needs of adults to engage in learning (*dispositional barriers*).

- *BUT: It is difficult to disentangle individual level barriers from institutional (or system) level barriers. We have made progress in this respect.*

Participation Rates in Adult E&T:
What the data tell us



* Red bar:
sex, age and educational attainment

* Green bar:
+ Family structure (e.g. young children)

* Orange & blue bar:
+ System characteristics &
unknown institutional level features

Source: Own calculations based on EU LFS 2011-2016

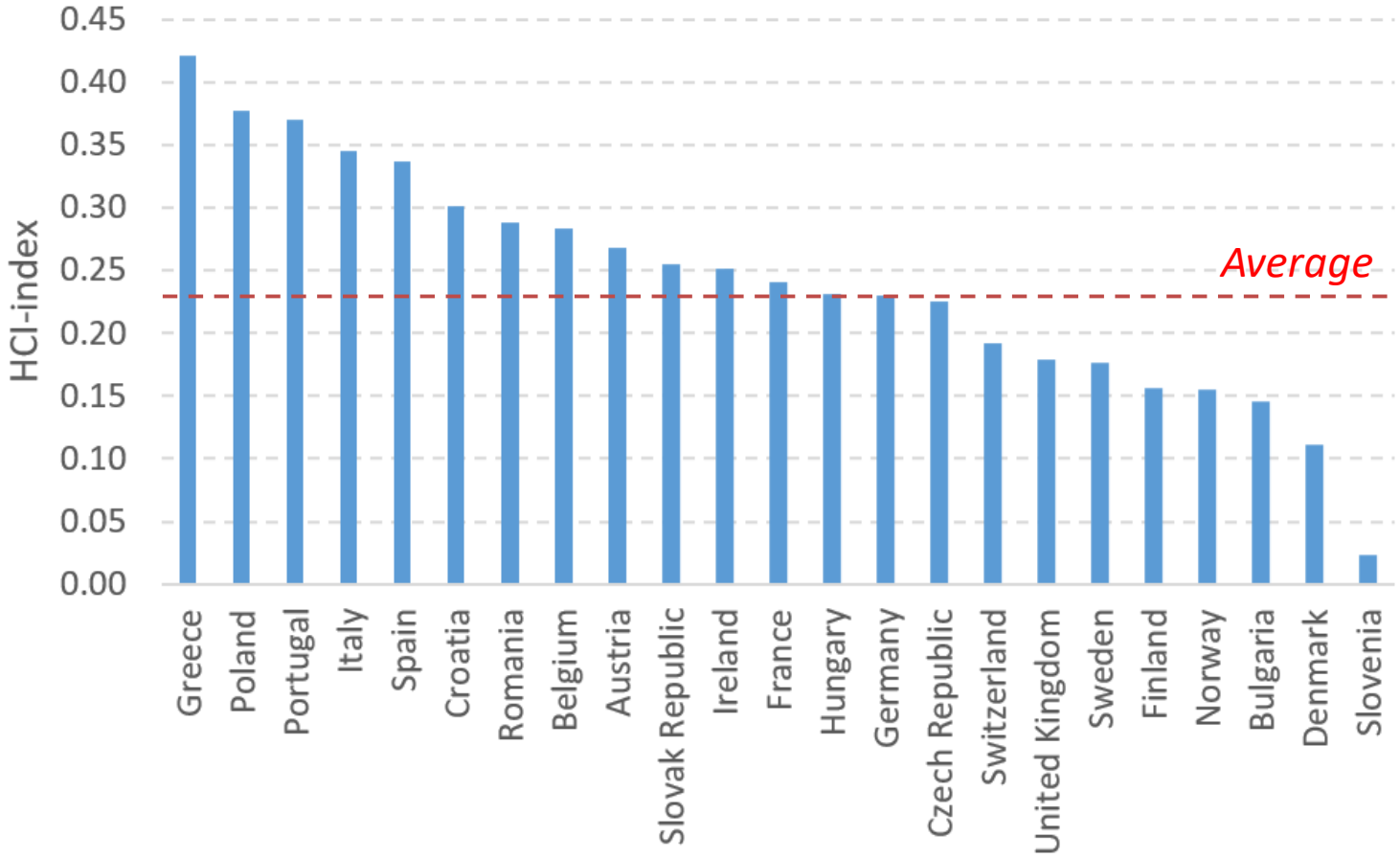
Participation Rates in Adult E&T

- We have made progress in disentangling individual level from institutional level barriers, however, for some variables still a tricky discussion.

  – Educational attainment as a personal feature (red bar), or as a product of society (orange & blue bar)?

  – The way we ***organize*** compulsory education, who can ***access*** higher education, and whether a course or training as an adult leads to a recognised ***diploma***, are all ***structural features of the education system*** underlying an individual's educational attainment and further likelihood to participate in adult E&T

Inequality in Opportunities for Disadvantaged Adults



HCI-Index = the extent to which low-educated employees participate less in adult learning than high-educated employees.

Variation in inequality of opportunities indicate that in some countries low educational attainment heavily restrict (young) employees from access to adult E&T, while in other countries, it is not.

Source: Own calculations based on EU LFS 2011-2016

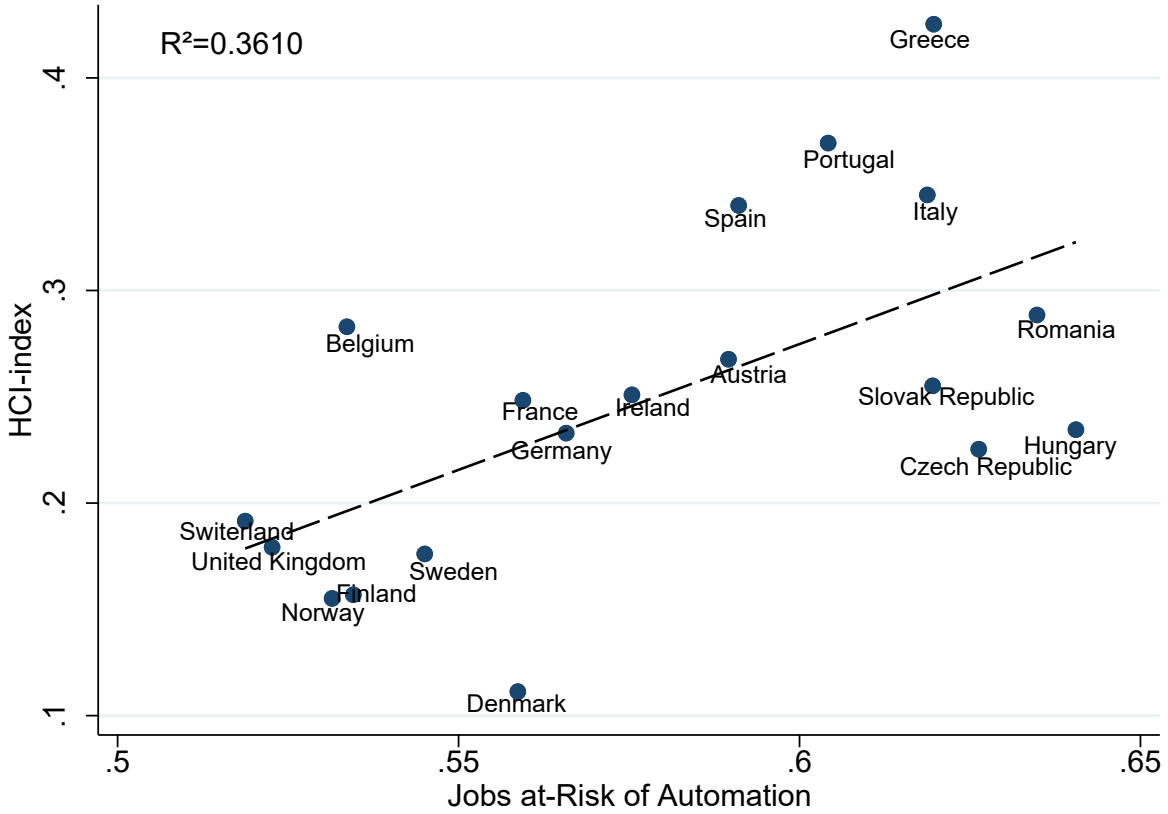
Inequality in Opportunities for Disadvantaged Adults

- Low educational attainment is a barrier to participate in adult E&T. The way we ***organize*** adult E&T across job typologie or sectors, who can ***access*** job-related courses and training, if available, and who **pays** for it, are all **structural features of the labour market** underlying the likelihood to participate in adult E&T across different levels of educational attainment.

- Consequences of restricted access to adult E&T for disadvantaged adults are largest, if technical change lead to ***process innovations, wherein disadvantaged adults cannot engage***. This has negative consequences for the economy as a whole.

Inequality in Opportunities for Disadvantaged Adults

Figure: Relationship between jobs at-risk of automation (%) and the Human Capital Inequality Index (HCI)



Low-educated employees in routinized jobs (at-risk of automation) have lowest access to adult E&T.

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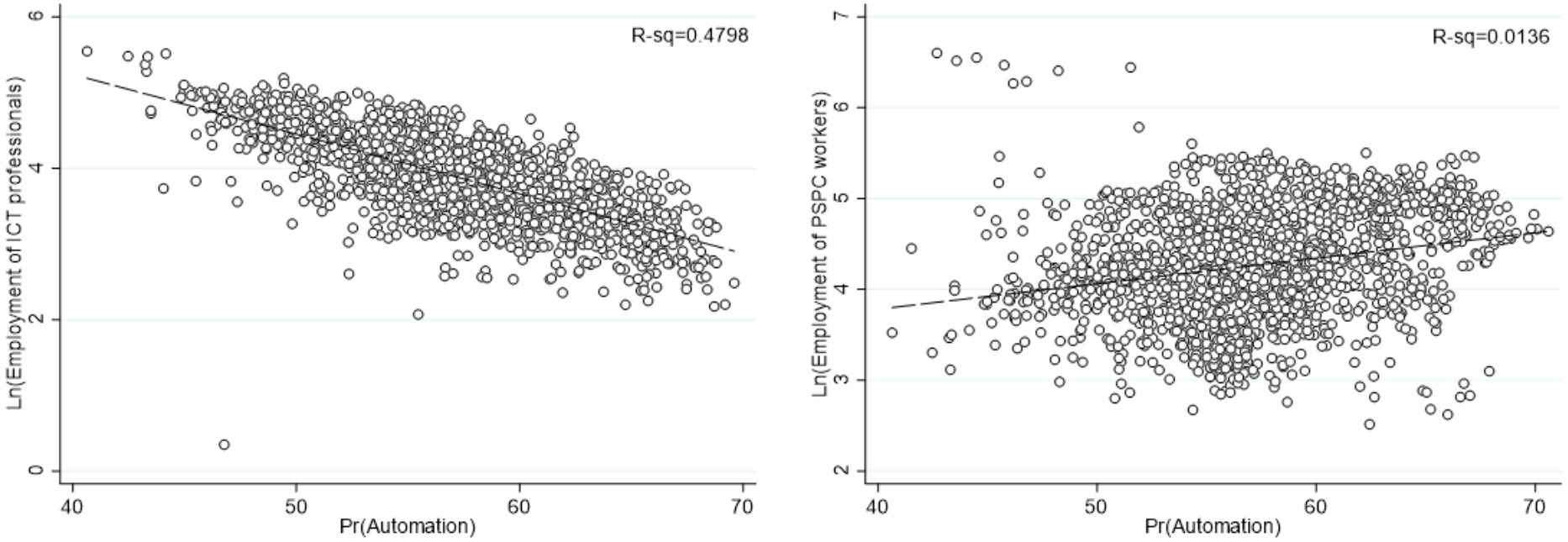
Source: Own calculations based on EU LFS 2011-2016; Frey and Osborne (2017).

Adult E&T across Job Typologies in the Digital Era

- Occupational change due to technological progress has a differentiated impact on adult learning across job typologies.
- The *job polarization hypothesis* indicates that technical change leads to automation of routinized jobs, while it increases demand for high-educated professionals in complex non-routine jobs, and while it leaves low-educated in non-complex non-routine jobs unaffected.
- We have studied the influence of occupational change on participation in job-related adult E&T among ICT professionals (= high-educated professionals in complex non-routine jobs) and personal service personal care workers (PSPC; low-educated in non-complex non-routine jobs).
- We depart (next slides) from observed employment dynamics in the two respective professions, and then link these dynamics to participation in adult E&T.

Occupational Change due to Technical Progress and Employment Dynamics

Figure·5:·Likelihood·of·Automation·of·Jobs·and·Employment·of·ICT·Professionals·(Left-Hand·Side)·and·PSPC· Workers·(Right-Hand·Side)·in·the·Labour·Force·over·the·Period·2011-2016¶

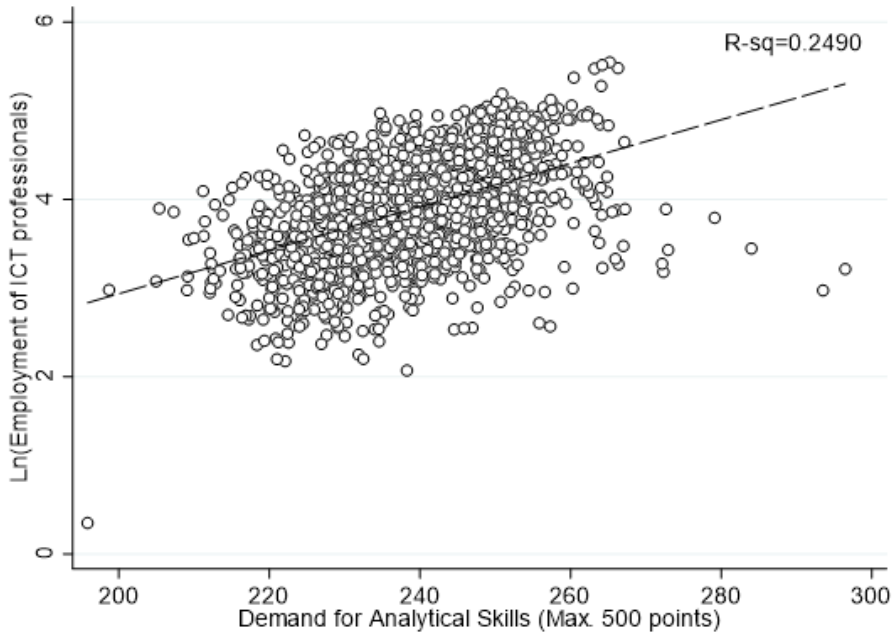


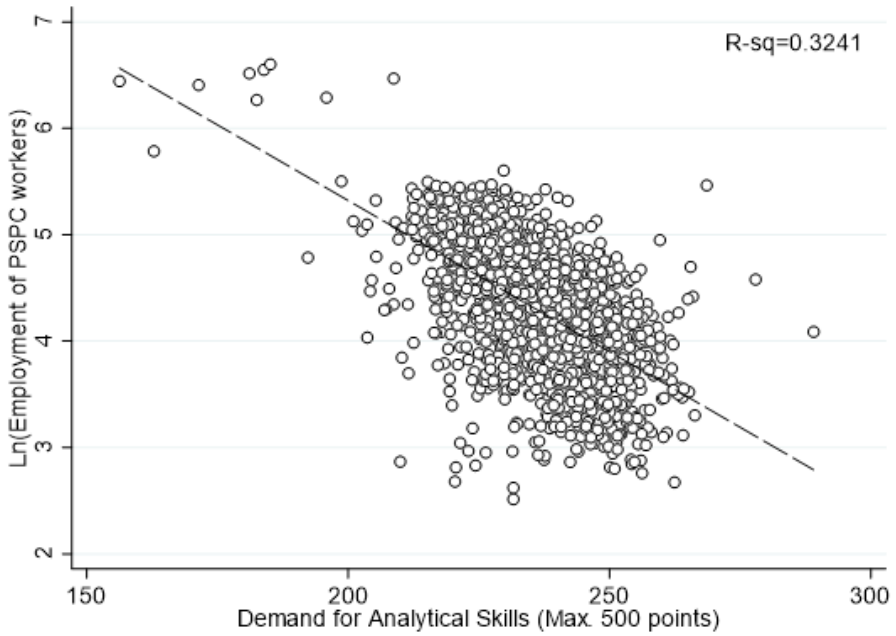
High demand for ICT-professionals in case societies have more complex non-routine jobs, and no significant association between automation and non-complex non-routine jobs.

Source:·Own·computations·by·using·EU-LFS·2011-2016.·The·risk·for·automation·of·jobs·follows·the· methodology·of·Frey·and·Osborne·(2017).¶

Employment Dynamics Mediated by Skill Demand

Figure 7: The Demand for Analytical Skills and Employment of ICT Professionals (Left-Hand Side) and PSPC Workers (Right-Hand Side) in the Labour Force over the period 2011-2016



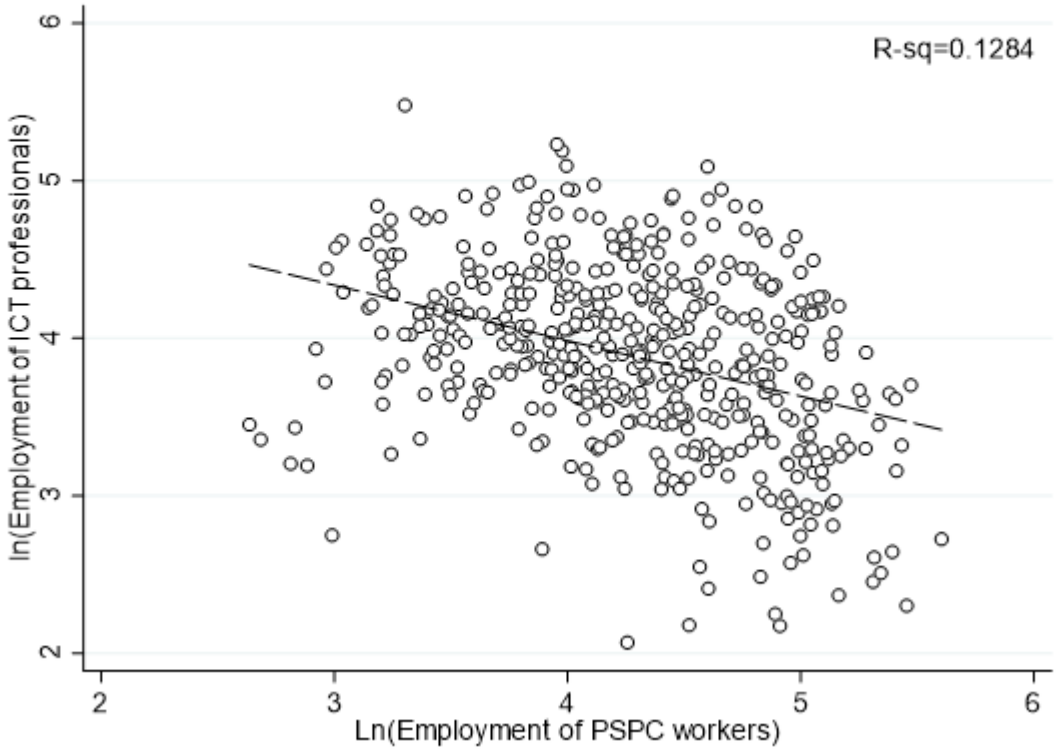


Source: Own computations by using EU-LFS 2011-2016. The demand for analytical skills is derived from the O*NET skill surveys.

Employment of ICT professionals (i.e. the quantitative aspects of occupational change) is closely associated with the development of the demand for analytical skills (i.e. the qualitative aspects of occupational change).

Regional tradeoff between Complex and non-complex jobs

Figure 8: Trade-off between ICT Professionals and PSPC Workers in 2016



Regions, frontrunner in the provision of ICT-related products and services, and with sufficient supply of tertiary educational attainment, will enforce their position in the coming years.

Source: Own calculations based on EU LFS 2011-2016

Adult E&T across Job Typologies in the Digital Era

- Reshaping of the employment structure towards ICT professionals (cf. the digital era) is linked with an increase in participation in adult E&T (+7,2%).

- Job-related courses are offered to PSPC workers as to start working in the job (e.g. as a result of active labour market policies); while ICT professionals engage in adult learning as a way of upskilling their skills (i.e. stimuli for continuous professional development).

- The demand for analytical skills negatively influences the level of employment of PSPC workers, while, in fact, the level of employment of PSPC workers in the European region, corrected for the effects of the business cycle, is fairly constant over the period 2011-2016.

- The consequences are twofold: (1) given that demographic ageing increasingly will put pressure on PSPC professions, there will be an ***ongoing interdependency between regions*** of the European Union in the long-run; and/or (2) ***geographical mismatch*** between supply and demand of labour will rise in response to lacking cross-border mobility.

Conclusion
How to get disadvantaged adults on board?

- System-level characteristics are embedded in observed outcomes with regard to adult E&T;
  - **Response:** Organization of compulsory education matters. In this respect we find that specialization in the final years of secondary education (as such, not too early in the curriculum) can increase adult learning over the life-cycle.

- Inequality in opportunities for disadvantaged adults closely related to structural features on the labour market (e.g. automation of jobs);
  - **Response:** R&D policy induces technical change, and technical change increases the demand for high-educated employees. Technical change is not inclusive. Tackle first the apparent failures of the adult E&T system, as to meet the (increased) demand for skills (by R&D policy) on the labour market.

- Adult E&T serves different purposes across job typologies (e.g. upskilling vs. integration).
  - **Response:** For adults in non-complex non-routine jobs, E&T should overcome its initial phase of integration as to guarantee upskilling of workers to enter more complex jobs in own sector of employment.