

*Increased Human Development, A
Consequence from Automation?
Fighting Knowledge Inequality in the
Face of Automated Labour*

Ljupcho Grozdanovski
University of Liège




1. Technological Skill Bias, Exacerbating Residual Market Inequalities?



a) Main Effects of AI's 'takeover' of labour

As AIs 'creep in' the labour market, three effects can be expected:

1. **automation of work**, implying the replacement of human labour input by machine input in some types of tasks;
2. **digitalisation of processes**, including the use of sensors and
3. **use of digital networks** to coordinate economic transactions in an algorithmic way.

- 
- **Polarization of the labour market:** a deeper divide between skilled and unskilled workers. If the difference in productivity between these two groups becomes sufficiently large, a drastic change in the employment structure occurs and unskilled workers lose their jobs (cf. Kenyes' prediction of **technological unemployment**)
 - **Deepening of the market skill bias:** skilled workers, able to adapt to new technologies, will have an easier access to the labour market than unskilled ones.
 - **Emergence of Skill premium:** skilled labour reduces the premia. Inversely, the increase of the number of unskilled workers increases the skill premium because it makes skilled workers more scarce.

b) Residual Market Biases



Basic Assumption: the AI-induced **skill and wage inequality** will occur in an already biased labour market.

E.g. Studies show that, in the EU, certain groups of workers (typically **women, entry-level workers, aged workers or foreigners**) are prevalent in low-skill/low-pay occupations.

Consequences



1. the labour markets in Europe are **already biased** against workers in low-skill/low-pay jobs that are, generally, highly ‘vulnerable’ to automation;
2. these workers are likely to be the ‘**losers**’ of the **s.c. skill premium** because they, presumably, lack the skills that will make them competitive, when labour demand for skilled workers rises in response to automation.

Main issues



Regarding the Market

- Will the technological skill bias **exacerbate** or **level up** existing market biases?

Regarding the law of the EU

Can workers who are the most likely ‘losers’ in the technological skill premium race:

- rely on EU law in order to fight against **future AI-induced forms of inequality?**
- rely on EU law in order to **gain effective access to education and training?**

Job Relevance as a Key Concept



Job relevance of skills is a **selection criterion**, used for determining if workers can access to, and remain in, the labour market.

In the current state of the labour markets: there are many forms of indirect discrimination *i.e.* a worker's level of productivity is made **dependent** on an inherent, and *a priori* **job-irrelevant feature**.

Main Inquiry: how will technological skill bias affect job relevance in the EU?

Method



1. Job Relevance in Access to Work

- based on the ECJ's case law, will automation contribute to eliminating some of the residual **market stereotypes** (e.g. that women are less productive than men), as it may make recruitment processes more merit-based?

2. Job Relevance in Career Advancement

- based on the ECJ's case law, will automation contribute to eliminating some of the residual **market archetypes** (e.g. that there are typically male professions) when it comes to the career advancement of certain groups of workers ?

2. Job Relevance, the Point of Demarcation between Skill Bias and Discrimination in Access to Labour



a) **Skill bias, a strict proportionality issue:** by virtue of a national provision, the access to a given profession is limited for a group of workers, based on the assumption that their abilities and productivity depend *exclusively* on an inherent feature such as gender or age.

E.g. Case C-273/97, *Sirdar*, EU:C:1999:523, Case C-285/98, *Kriel*, EU:C:2000:2, Case C-229/08, *Wolf*, EU:C:2010:3, Case C-258/15, *Sorondo*, EU:C:2016:873.

b) Skill bias is a legitimacy issue: cases in which job relevance is assessed in relation to the legitimacy of a labour and social policy objective, having a “public interest nature distinguishable from purely individual reasons particular to the employer’s situation.” (case *Age Concern England*, C-388/07, § 46).

E.g. National policy favoring the employment of young workers (Case C-143/16, *Abercrombie & Fitch Italia Srl*, EU:C:2017:566)

E.g. National policy on compulsory retirement age (Case C-411/05, *Palacios de la Villa*, EU:C:2007:604)



Intermediary Conclusion:

The ECJ's narrow view on job relevance: a job requirement should be *directly relevant* for the exercise of a worker's activities, in light of what a job actually requires.

c) Skill bias ‘authorised’ by EU Secondary Law



Notion of Genuine / Genuine and Determining Skill (Art. 4 Dir. 2000/78 and Art. 4 Dir. 2000/43)

E.g. IR case (C-68/17). The ECJ required an “**objectively verifiable existence of a direct link** between the occupational requirement imposed by the employer and the activity concerned.”

Can an ethical code of conduct be a genuine professional requirement?



Achbita (C-157/15): absence of direct discrimination. The requirement was endogenous (neutrality imposed by the employer).

Bougnaoui (C-188/15): discrimination. The requirement at issue was exogenous (refusal by clients to work with veiled Muslim women).

The Court seems to show consistence in its narrow view on job relevance: it is the nature of an occupation that dictates which skills are required, not the prejudice of market operators.

Lesson for the Future



Take-away from the ECJ's case law on job relevance and discrimination:

1. that skill-biased recruitment implies the selection of workers exclusively based on an **objective, direct and necessary link between a skill requirement and a given profession;**
2. that discriminatory recruitment implies the selection of workers primarily based on a quality, feature or skill that does not directly impact the worker's ability to perform a job and her level of productivity

Market polarization and technological skill bias may benefit educated workers because their skills will:



- 1. be scarce and objectively job relevant;**
- 2. make these workers more sought after by employers;**
- 3. make these workers more immune to other types of biases.**

3. Job Relevance, the Point of Demarcation between Skill Bias and Discrimination in Career Advancement

Standard Market Archetypes

- IT is the profession of the future and a 'boys' game' (nerds or cyber-brat packs);
- Women are more likely to be caretakers and tend to choose occupations (and contracts) that lead to a good work-life balance
- Aged workers are less adaptable and less ambitious than the younger ones...

ECJ case law on the types of contracts offered to some groups of workers



E.g. some workers (typically women) may be predominantly part-timers, while other workers (typically men) may be predominantly full-timers.

E.g. of case law

Gender

Case C-196/02, *Nikoloudi*, EU:C:2005:141, Case C-1/95, *Gerster*, EU:C:1997:452

Age

Case C-144/04, *Mangold*, EU:C:2005:709, Case C-447/09, *Prigge*, EU:C:2011:573



Classical example: the s.c. Motherhood Penalty

A female worker may be dismissed for being at an advanced stage of *in vitro* fertilization, raising the realistic probability of maternity leave. Female workers with children do tend to pay the s.c. motherhood penalty.

(Case C-506/06, *Mayr*, EU:C:2008:119)

Lesson for the Future



Automation **may not eradicate discrimination** when it comes to career advancement because mentalities in the labour market tend to shift slowly.

However: **education trumps bias**. Hyper specialized workers with high levels of expertise will **always be high in demand**, regardless of their age, gender or family situation. Hence the incentive to **skill, reskill and upskill**.

Reskilling and upskilling



ECJ case law in the area of free movement of workers

Upskilling: continuity requirement between previous profession and vocational training (Case 293/83, *Gravier*, EU:C:1985:69.)

Reskilling: continuity requirement does not apply (Case C-357/89, *Raulin*, EU:C:1992:87)

Main conclusions



Access to work: due to the technological skill-bias, the labour market will become more skill biased and less discriminatory

Career advancement: the technological skill-bias will not eliminate residual inequalities (professional archetypes)

Effective access to training: is guaranteed under the free movement of workers. Future case law on Art. 14 Charter of Fundamental Rights is possible...