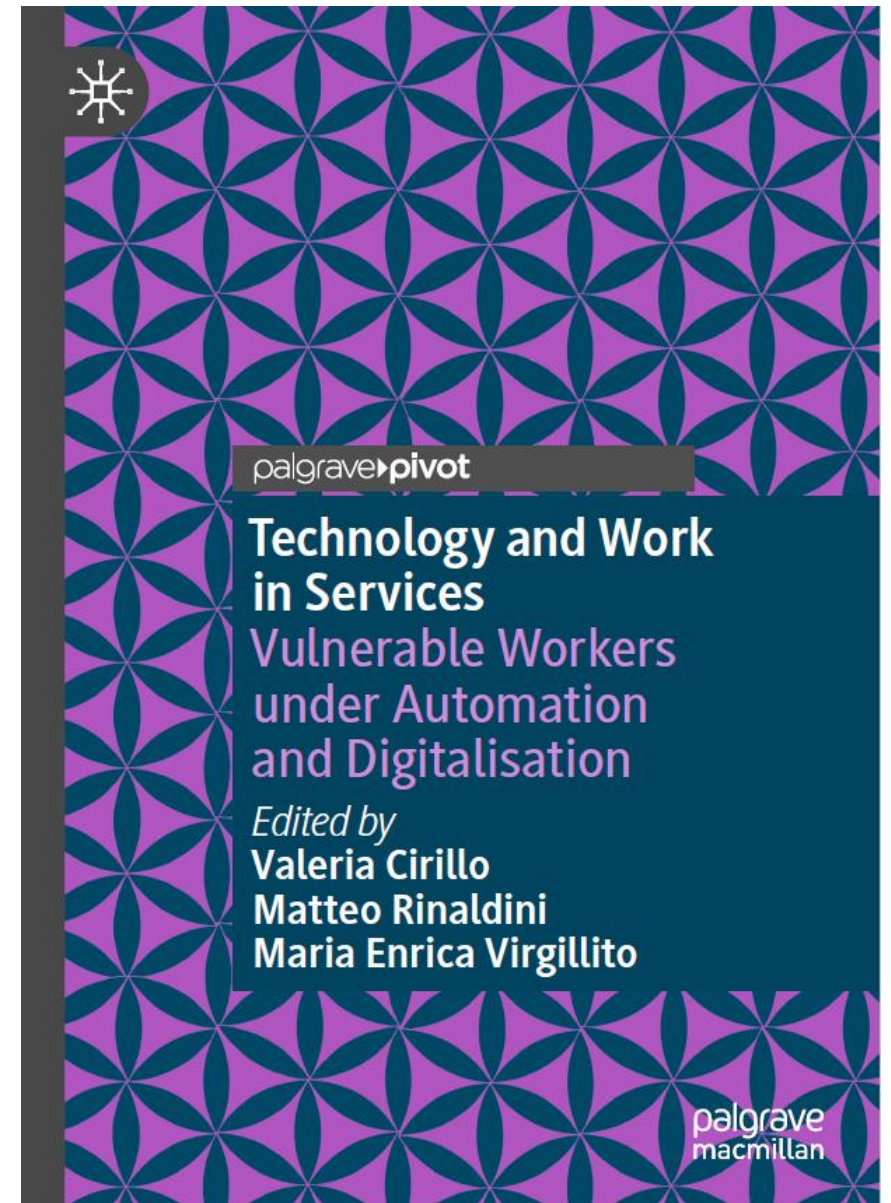


(In)visible and vulnerable work under technology

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BRIDGES Masterclass series

Building gender-equal workplaces: From vision to practice



*To the vulnerable,
often invisible,
workers around
the world and
within our
everydaylives*

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What is the study about?

- The study **examines ‘the socio-economic impact of automation in service industries’** to support the research activity undertaken by the Employment team in JRC Unit B4, in collaboration with DG Employment

- Specific objectives

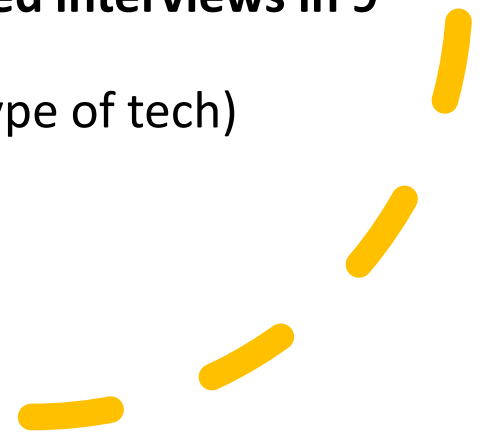
To examine the impact of 3 different technologies/applications

- representing examples of **automation** in service industries
- likely providing useful insights on the impact of automation on work organization and job quality
- **Automated Guided Vehicles (AGVs), Cleaning robots, Health monitoring devices**

To provide qualitative-based evidence on adoption/use of selected technologies and potential drivers/barriers/opportunities/challenges/risks

- conducting **qualitative, in depth, semi-structured interviews in 9 establishments**
- and carrying out **3 case studies** (one per each type of tech)

Drawing relevant policy implications



14.0: Digitalization and automation of work processes

- ✓ Over the last decades, **investments in digital and automation technologies deeply increased**, modifying production and distribution processes both in manufacturing and service industries
- ✓ New digital and automation technologies promise improvements to production and service delivery processes, **deep changes in the nature and organization of employment**
- ✓ Debate polarized between *techno-optimists* and *techno-pessimists*, both in general sharing a **strong deterministic perspective on the unfolding of technologies** within sectors of activities, firms, and their impact upon labor
- ✓ More than quantitative effects, need to focus on **quality of work**
- ✓ New technologies include a **diverse set of solutions and capabilities**, encompassing robotics, artificial intelligence, industrial internet of things, big data, cloud computing, augmented reality, additive manufacturing and cybersecurity → **difficult to draw precise line of demarcation**
- ✓ Attention toward **tasks more than jobs**, consequences on work that can be better understood at the level of tasks more than jobs
- ✓ A full understanding of the technological complexity underling robotics and automation is still lacking, most of all when looking at the consequences on work and **vulnerable workers** and in **services**

Who are ‘invisible’ workers?

- The first definition of invisible work (Arlene Kaplan Daniels, 1987) characterizes predominantly *reproductive* and *feminised* forms of labour, with particular reference to domestic work, care work, and relational-emotional labour.
- ▶ Broader interpretations of invisible work also include non-reproductive forms of labour, such as **cleaning services** (“dirty jobs”) and **digital labour**
- ▶ What do reproductive and non-reproductive forms of labour defined as invisible have in common? What is invisible? The work itself? The body? Invisible to whom?

“Invisible work” can be understood as labour that is economically devalued through three intersecting sociological mechanisms—identified as cultural, legal, and spatial mechanisms of invisibility—which operate in different ways and to different degrees (p. 337) – Hutton, 2017

Who are 'vulnerable' workers?

Vulnerable work can be defined along two main dimensions:

- ▶ **continuity over time**, which determines access to social protection and employment-related benefits (pension contributions, paid leave, sick leave, maternity protection, etc.);
- ▶ **work intensity**, which is strongly and directly related to labour income

Many forms of vulnerable work become invisible as a result of the economic devaluation of the activities performed.

→ Concentration of vulnerable work in services: we focused on **logistics, cleaning and health**

In the book we adopted a sectoral approach...

Why Focus on Invisible and vulnerable Work?

- The growing relevance of **non-standard work in contemporary economies**
- The **stratification of social groups**, particularly women and migrants, in these occupations mainly in logistics and cleaning
- The role of invisible work in generating **social, economic, cultural, and relational inequalities**
- The fact that invisible work **fulfils essential social needs**
- The need for **fair remuneration**: inequality is not only normatively undesirable, but also inefficient, as it does not enhance **organizational capabilities**

Logistics, Cleaning and Health

- Wages well below the average level in the economy

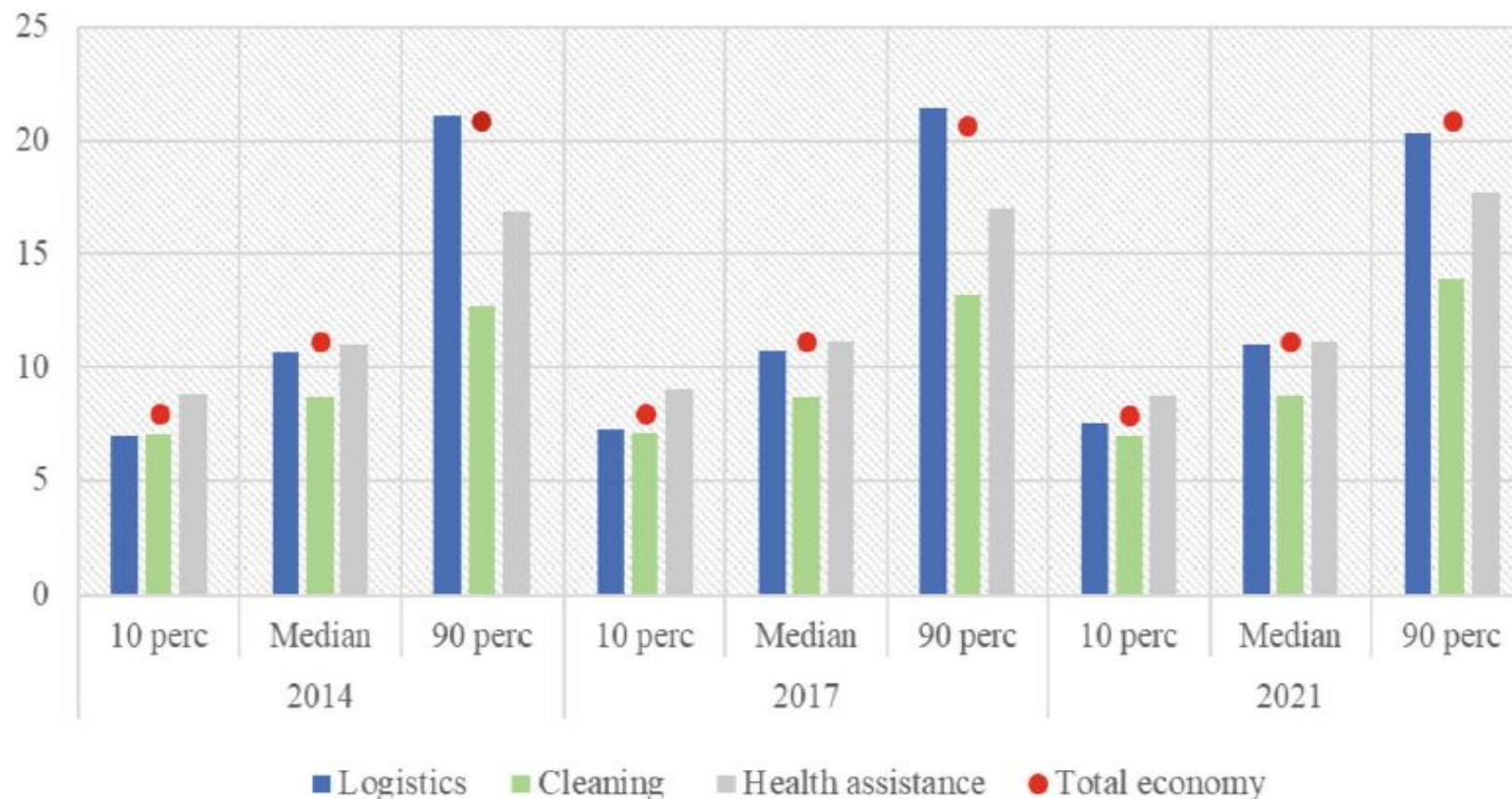
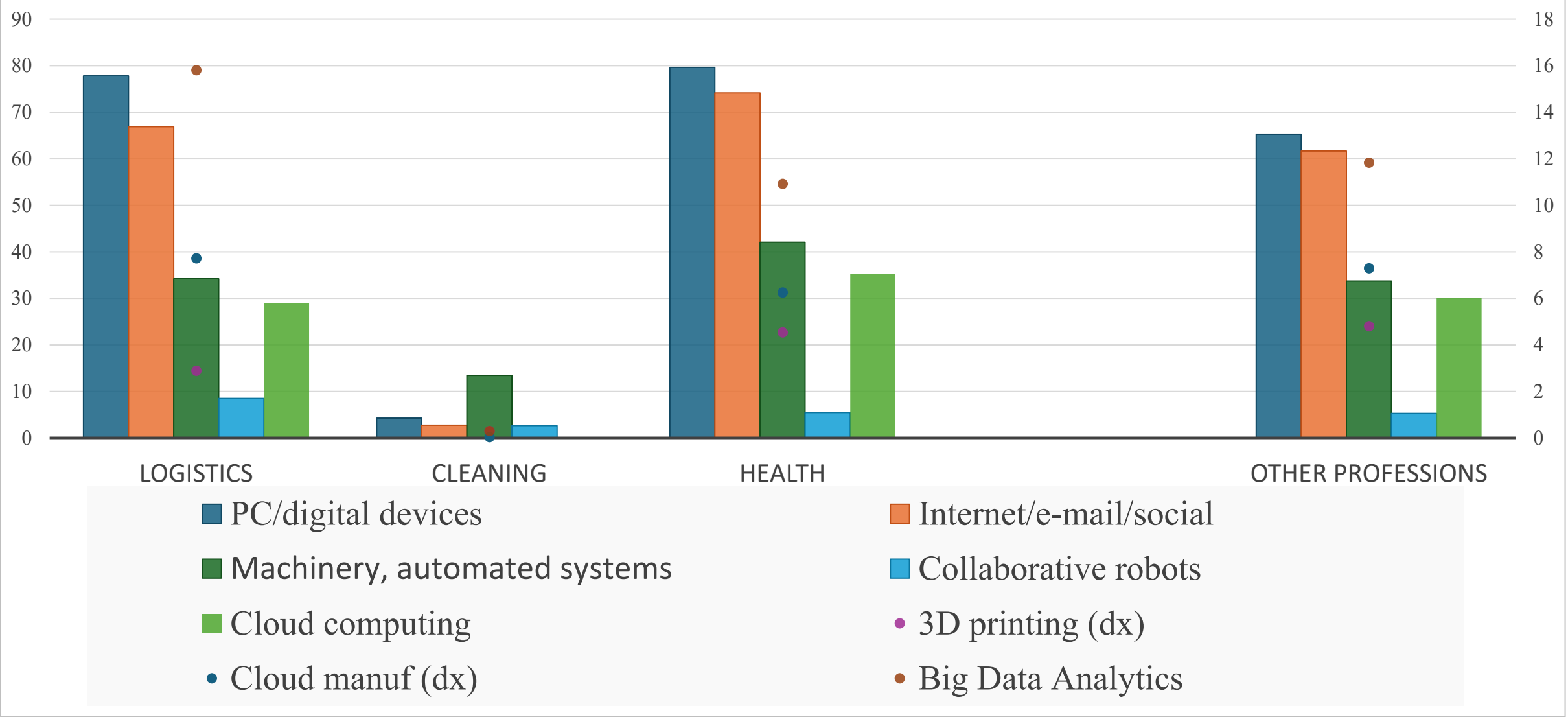


Fig. 1.3 Hourly gross real wages of private sector dependent job positions over time by wage percentile. *Source* Annual Register on Wages, Hours and Labor Costs for Individuals and Enterprises (RACLI), Italian National Institute of Statistics. Logistics: warehousing and transport support activities (Nace 52); Cleaning: service activities for buildings and landscape (Nace 81); Health assistance: health care (Nace 86). The main unit of analysis in the RACLI register is the employee position, defined as the relationship established between an employer and an employee, characterized by a start date and comparable to an employment contract

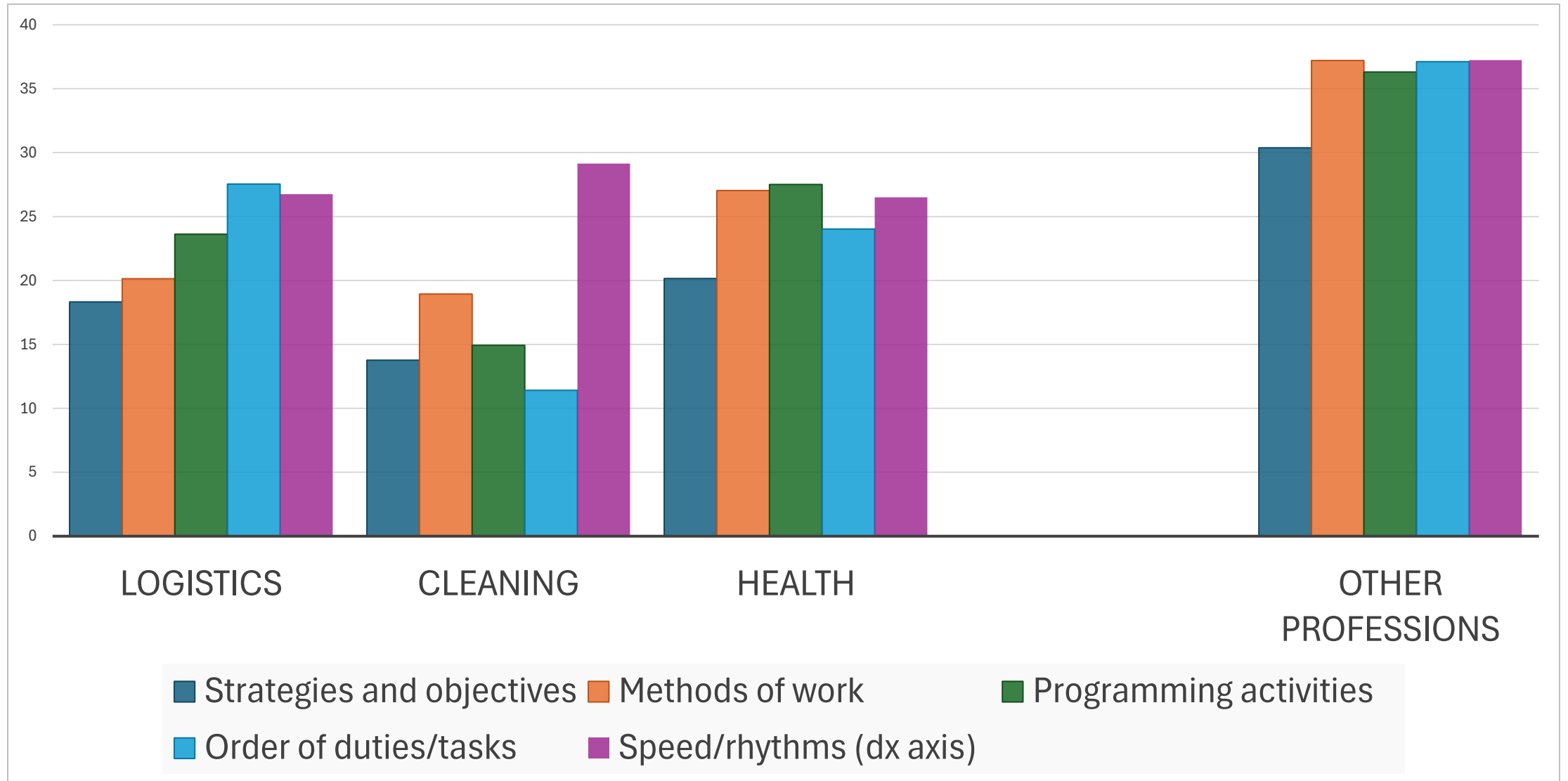
Technologies and work organizational practices by selected professions (QDL, 2021)



Percentage of Workers by Technology Used in selected occupations (2021)



Share of workers by level of autonomy in work organization and methods (2021)



Vulnerable Work and Technology

- **Sector-specific dynamics shape work processes**

- The interaction between invisible labor, automation and digitalization is not trivial and far from deterministic deskilling expectations

- **Re-professionalization in healthcare and restructuring of hierarchies**

- One example is on the healthcare sector: new technologies are reshaping hierarchies in favor of lower professional categories, creating a new hybrid role for nurses who are now able to perform tasks that were previously in the domain of doctors

- **Passive relationship with technology in cleaning services**

- **Disappearance of functions** in logistics

- **Limited or absent collective bargaining**

Discussion

Key Conditions for Industry 5.0 to Foster Inclusive and Equitable Workplaces

- **Fair pay and job continuity** (*shifting from vulnerability to security*)
- **Stable and transparent contracts** (*making work visible and protected*)
- **Greater autonomy in daily work**
- **Active participation in decision-making**, including technological choices

References

Hutton, 2017. “Mechanisms of invisibility: rethinking the concept of invisible work”, *Work, Employment and Society*, APRIL 2017, Vol. 31, No. 2 (APRIL 2017), pp. 336-351