

THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE WORKPLACE IN EGYPT

Rawane Yasser, Irene Selwaness and Cecilia Poggi

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01 . INTRODUCTION

- Important evolution of the use of computers and the internet over the past decade
- Focus of the paper:
 - To what extent these advances in connectivity have been reflected in the labor market;
 - To what extent information technology has been adopted in the workplace;
 - Remote arrangements due to COVID-19;
 - The distribution of computer skills in the labor force, the different types and job requirements;
 - Employment through digital platforms.

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05. DIGITAL PLATFORMS

02. DATA AND CONCEPTS

- We examine several aspects of the prevalence of technology in the workplace.
- **Three modalities of workplace technology use:**
 1. The worker reports using a computer at work that is not connected to the internet;
 2. The worker reports using a computer at work that is connected to the internet;
 3. If the worker reports not using a computer, their internet use for work is checked to determine their use of digital devices or technology for work purposes (relying on data from the information technology module)
- **Computer skills**
 - In the ELMPS 2023: subjective perception of the level of computer skills (5-step Likert scale) and the types of computer skills.
 - The extent to which jobs require computer skills and its evolution over time
- **The use of digital platforms for work purposes**
 - The main question we rely on: « Do you find, work, opportunities, or gigs within this position through a digital platform or app? »

03.1 . USE OF TECHNOLOGY IN THE WORKPLACE: TYPES OF DIGITAL TECHNOLOGY

- Overall use of computers/the internet for work purposes: 20 to 21% from total employment
- Gendered pattern: women more likely to use a computer at work or for work purposes.
- Important shift towards internet use: through a computer or another mobile device
- Use of computers not connected to the internet becoming nearly negligible in 2023.
- Use of internet varying greatly by type of employment

Figure 1. Percent of workers using technology for work by sex in 2012, 2018 and 2023 (employed last 3 months, ages 15-64)

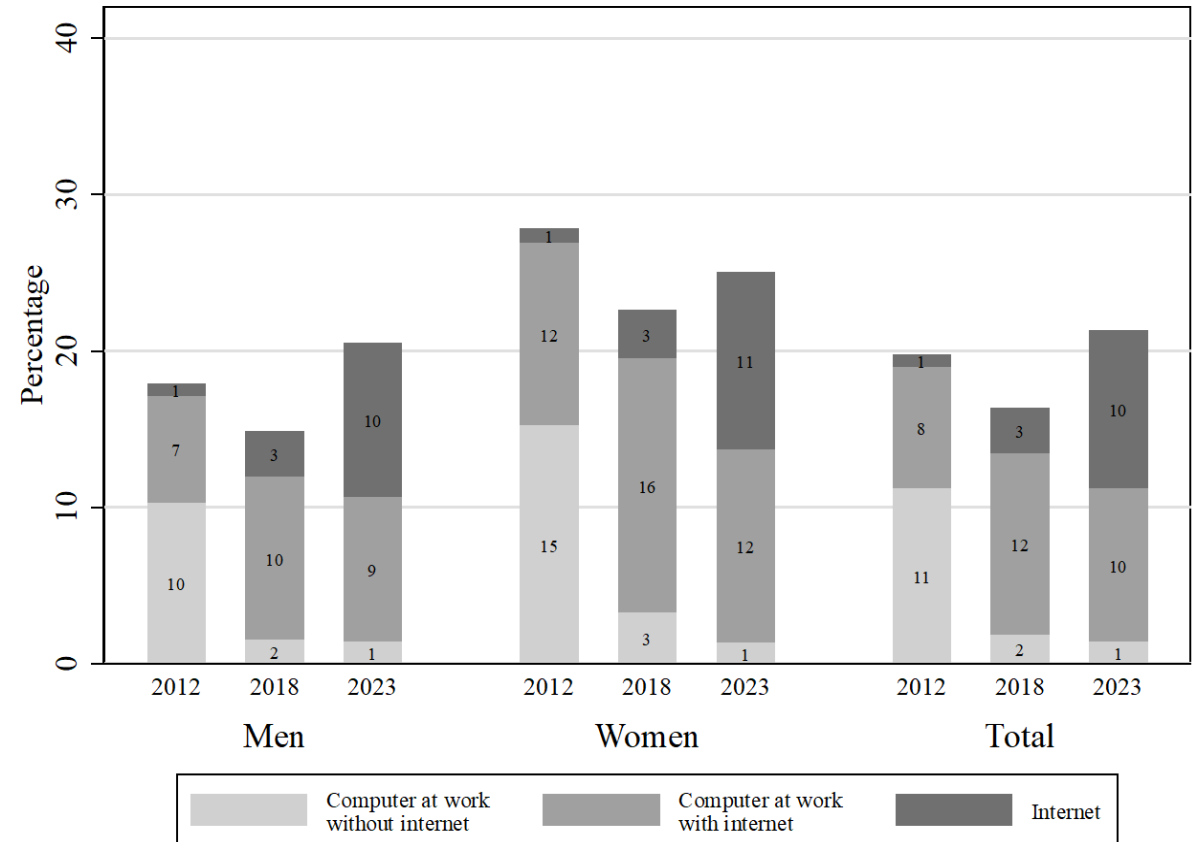
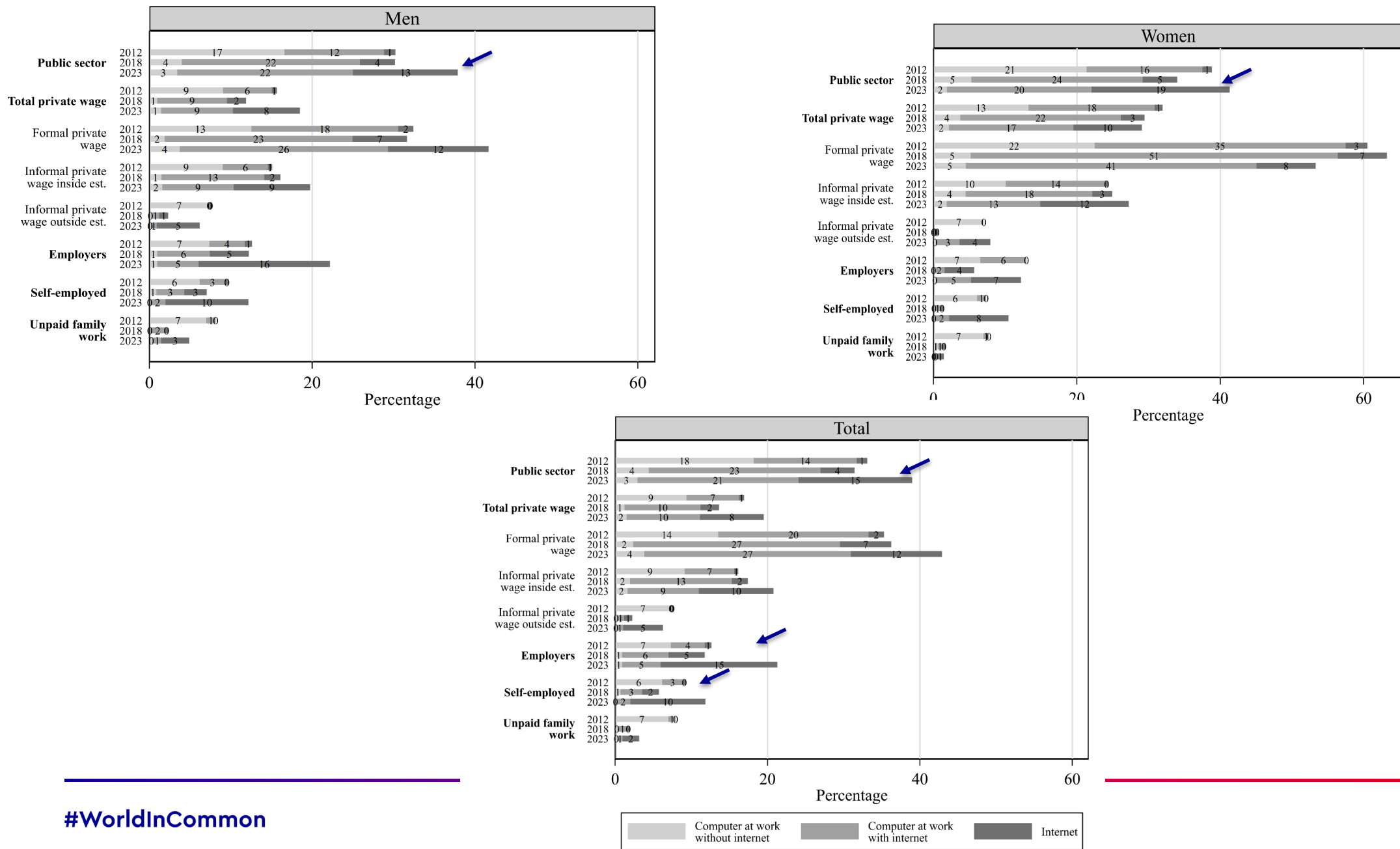


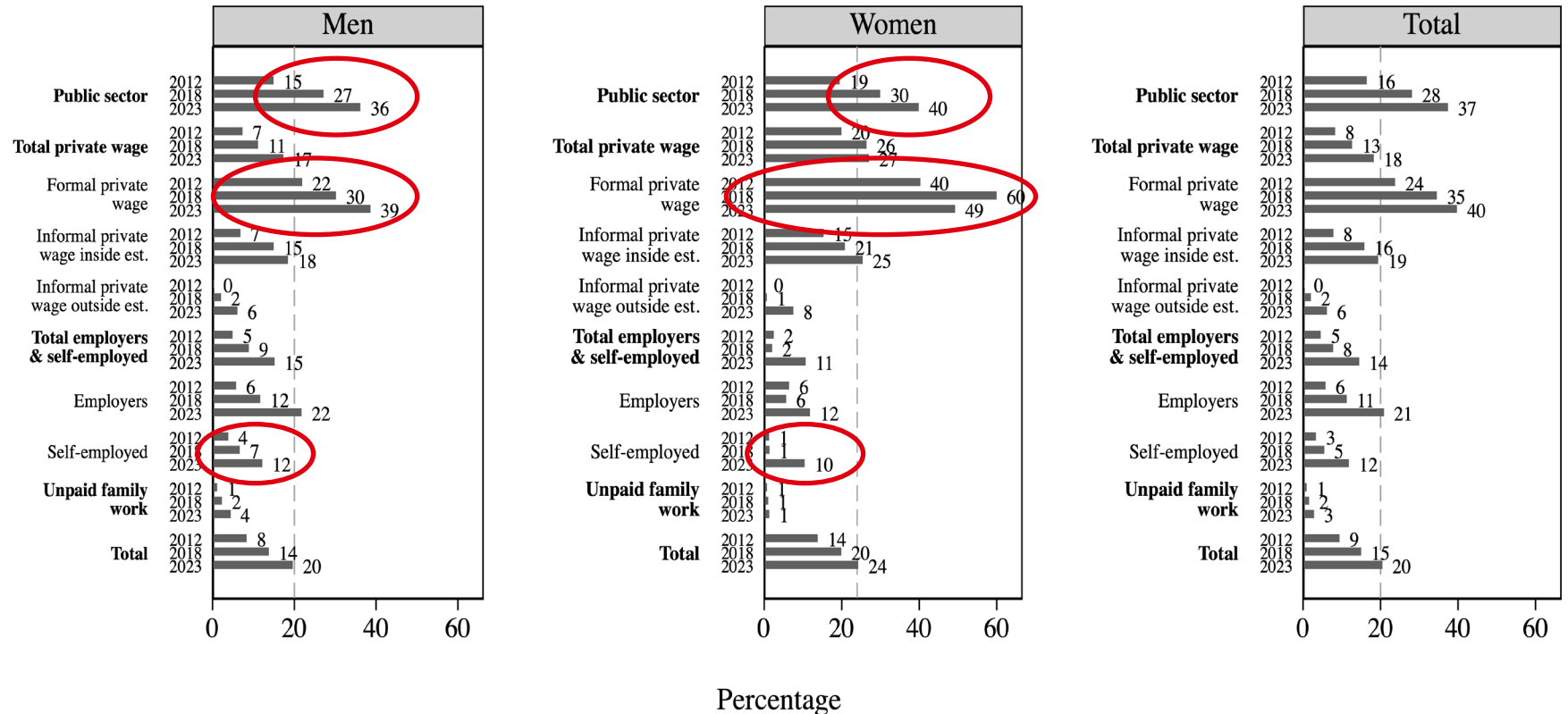
Figure 2: Percent of workers using technology for work by sex and employment type in 2012, 2018 and 2023 (employed last 3 months, ages 15-64)



03.2. USE OF TECHNOLOGY IN THE WORKPLACE: FOCUSING ON THE USE OF INTERNET FOR WORK PURPOSES

- Use of internet through devices or through a connected computer at work
- Acceleration in the use of internet for work across employment types and gender

Figure 3: Proportion of workers using internet for work by sex and employment status in 2012, 2018 and 2023 (employed last 3 months, ages 15-64).

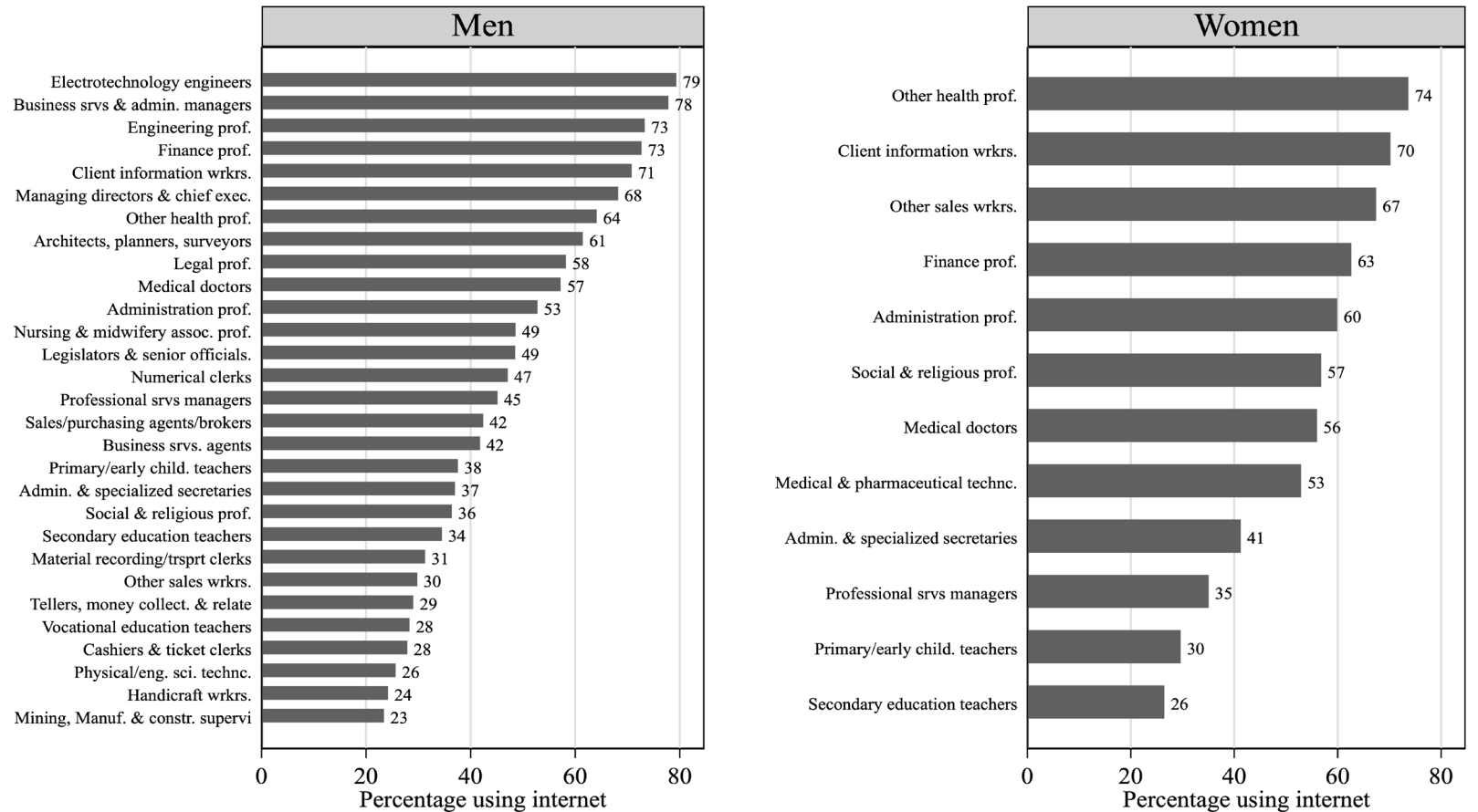


Dashed line is the average internet use (%) in 2023

03.2. USE OF TECHNOLOGY IN THE WORKPLACE: THE USE OF INTERNET

Figure 4: Top occupations at the three digit-level with the highest proportion of workers using the internet for work in 2023 by sex (employed in the last 3 months, ages 15-64)

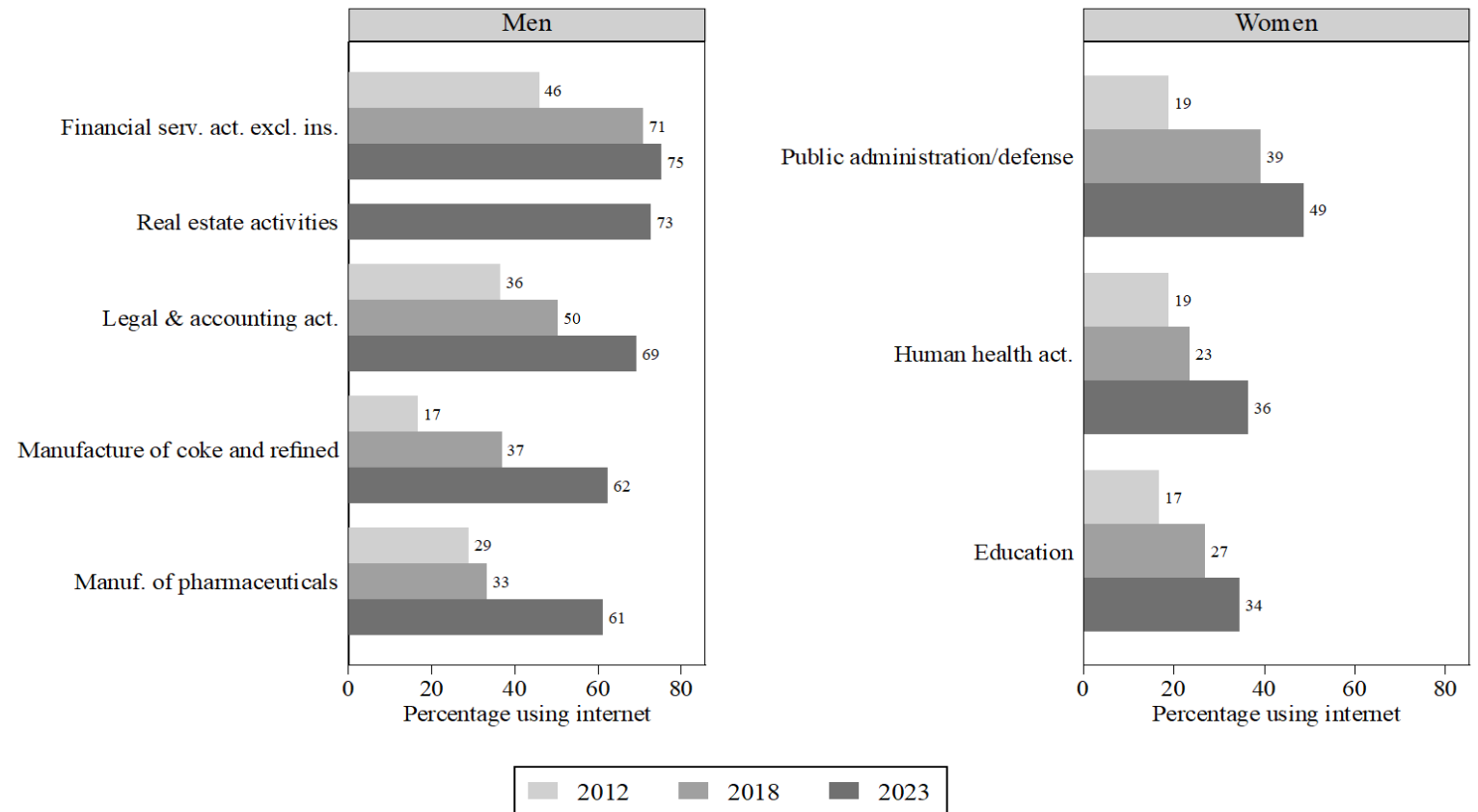
- Client information workers and finance professionals : common top occupation for both men and women
- Top occupations classified as ICT specialists or ICT-task intensive jobs



03.2. USE OF TECHNOLOGY IN THE WORKPLACE: THE USE OF INTERNET

Figure 5: Sectors of economic activity (at the two digit-level) with the highest proportion of workers using the internet for work in 2023 by sex (employed in the last 3 months, ages 15-64)

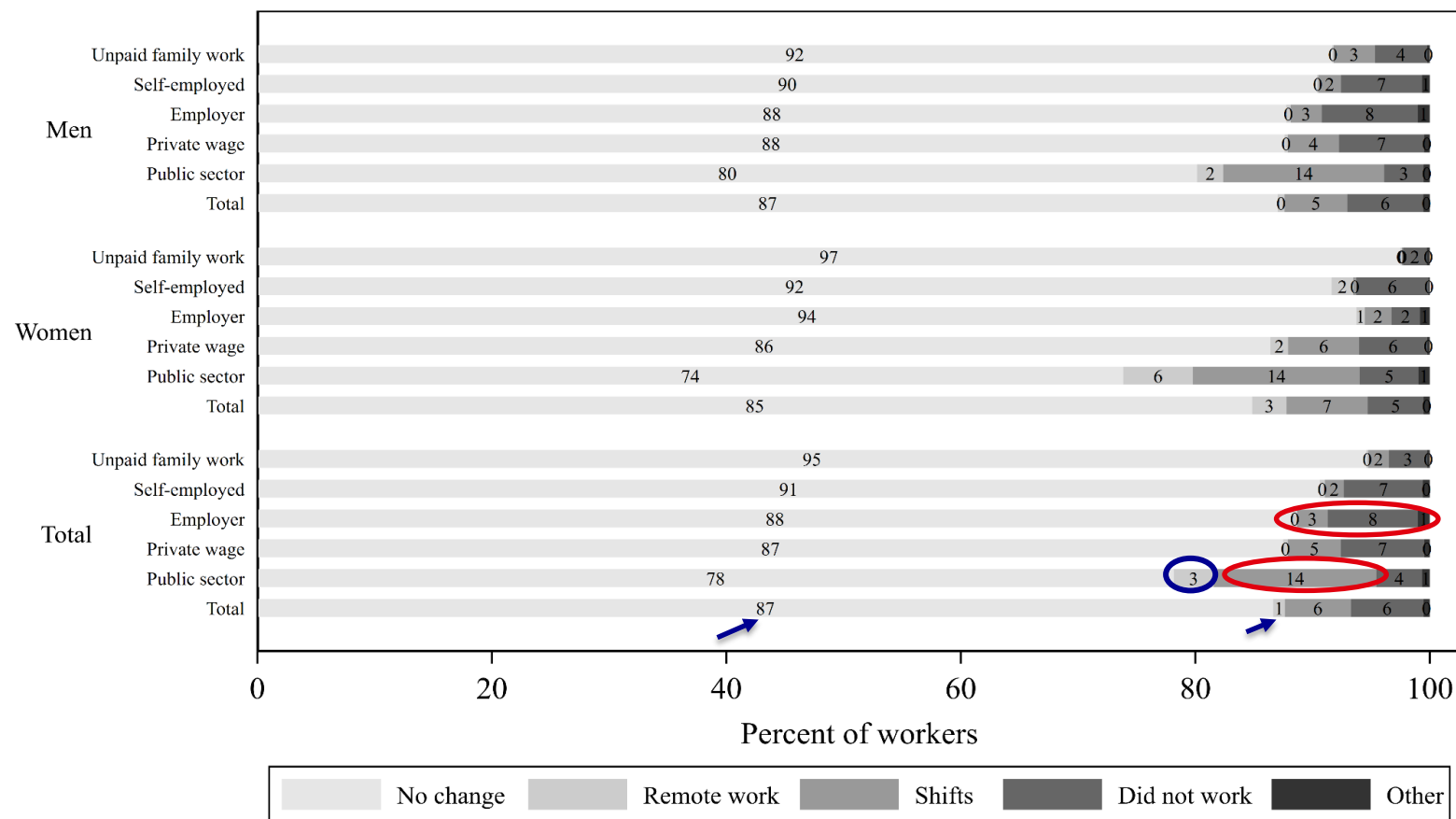
- Gendered employment patterns & women's sectoral concentration: Top economic sectors for women different from men



03.3. USE OF TECHNOLOGY IN THE WORKPLACE AS A RESPONSE TO COVID-19

- 87% did not experience any change in their job or work arrangement since the onset of the pandemic.
- Only 1% among those who witnessed change had transitioned to remote work.
- Workers with more stable jobs were more likely to experience adjustments in response to COVID-19 such as public sector employees (14% experienced work in shifts, 3% moved to remote work).

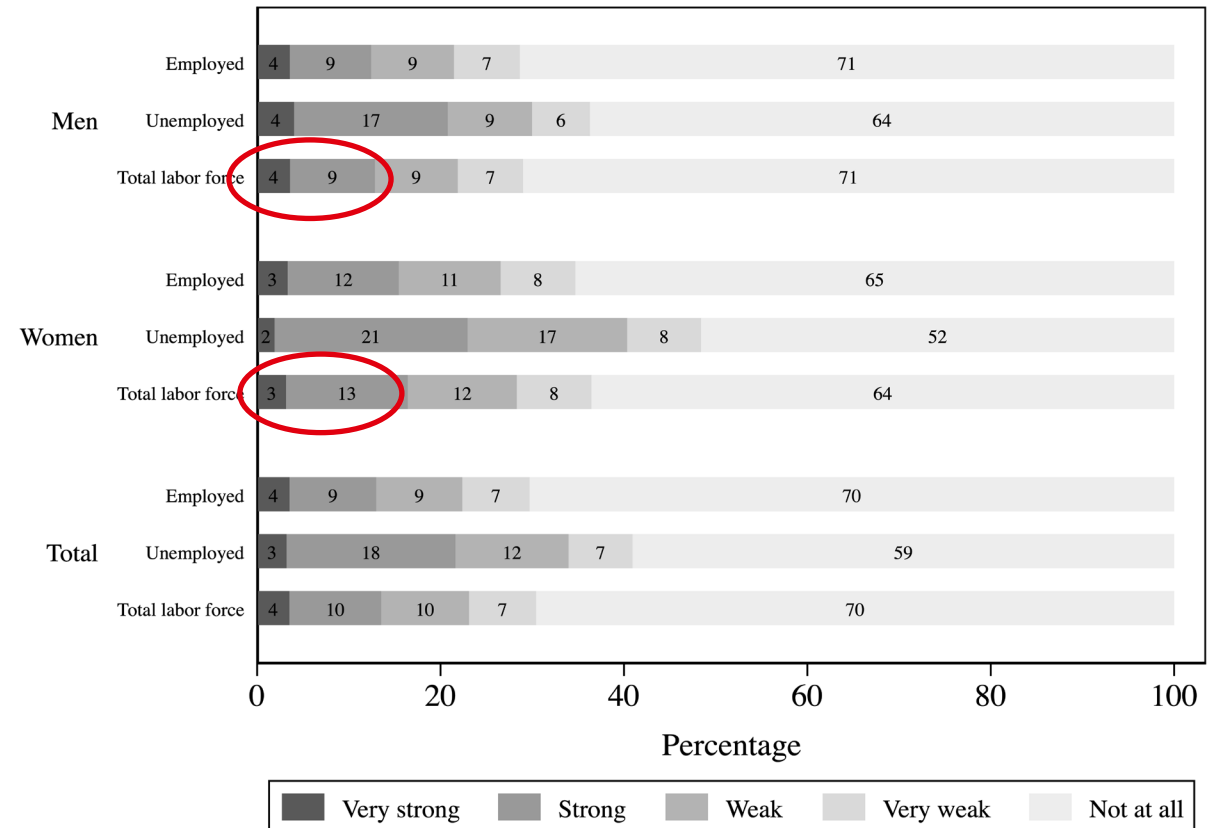
Figure 6: Percent of workers who witnessed a change in their primary job since February 2020 by sex and employment type (employed last 3 months, ages 15 to 64)



04.1 . SUPPLY OF COMPUTER SKILLS

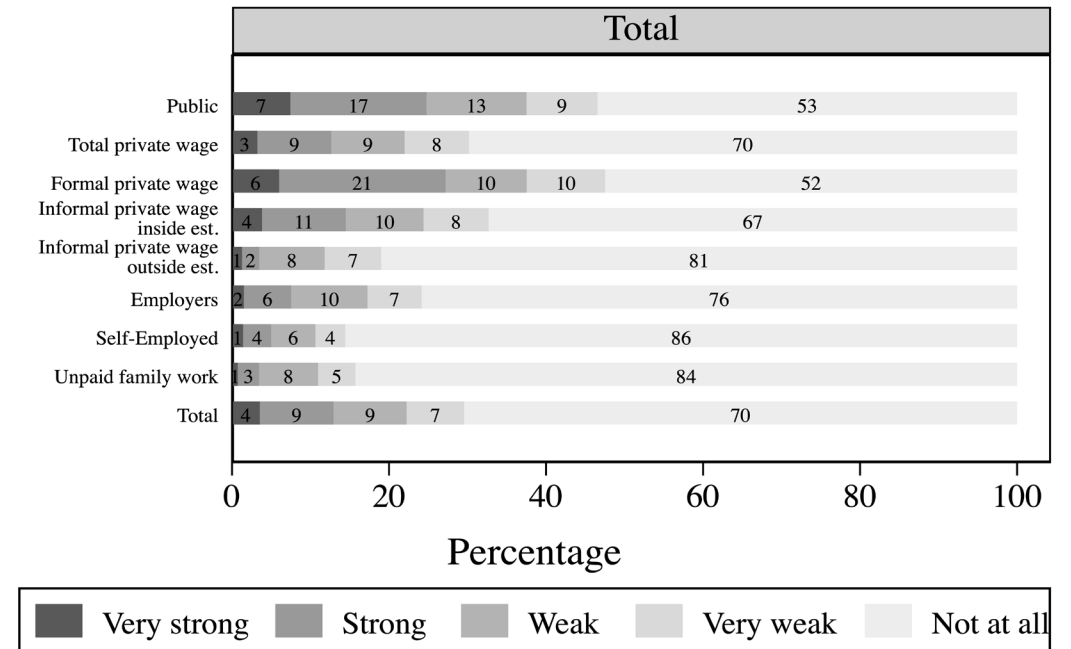
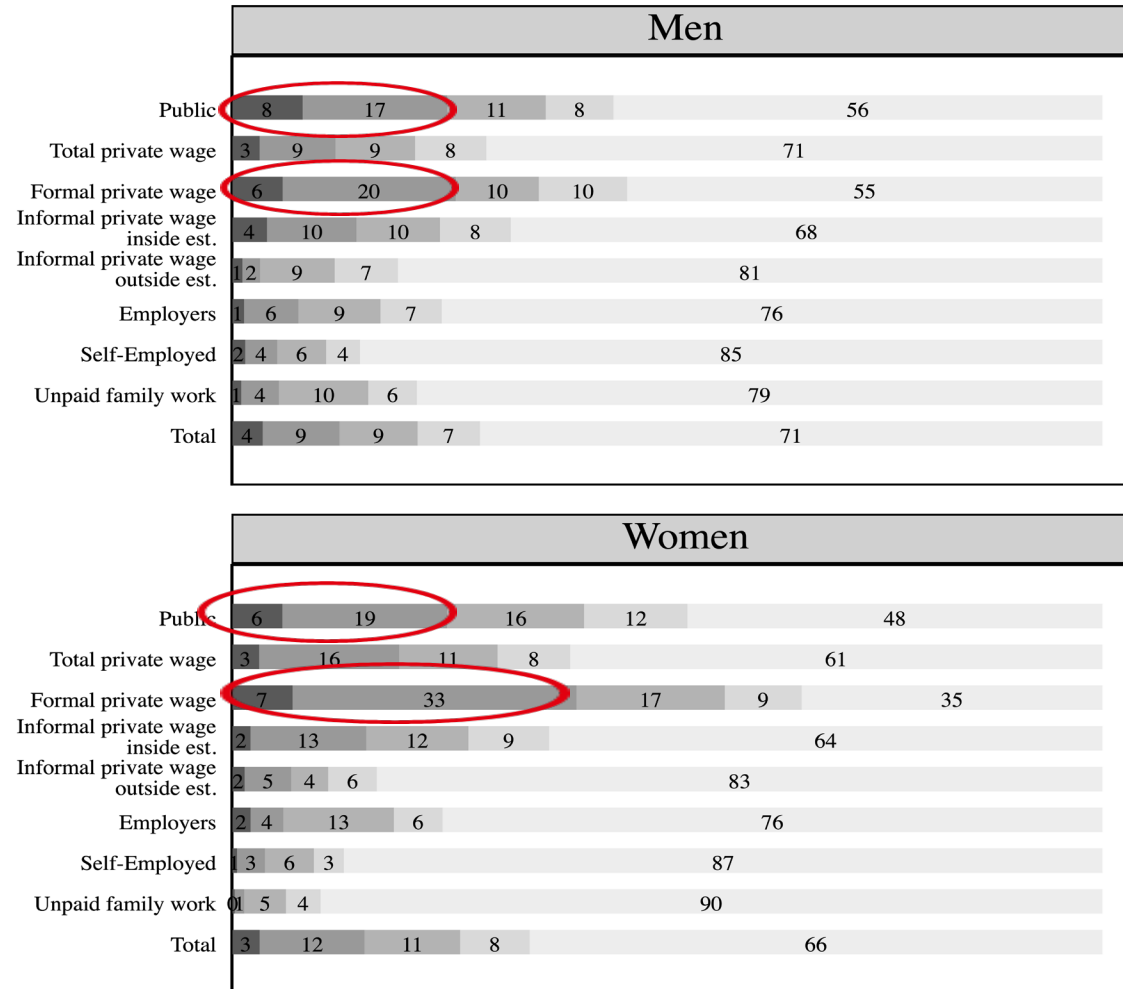
- Employed women more likely to report having strong or very strong computer skills
- Strong selectivity into the labor force by educated women
- Unemployed women: highest rate of strong or very strong computer skills

Figure 7: Distribution (%) of computer skill proficiency by sex, among the labor force (standard definition) (ages 15-64)



04.1 . SUPPLY OF COMPUTER SKILLS

Figure 8: Distribution (%) of computer skill proficiency by employment type and sex (ages 15-64)



04.1 . SUPPLY OF COMPUTER SKILLS

- Men: software and application developers and analysts (93%) highest to have strong or very strong computer skills
- Women: finance professionals had highest rate of strong computer skills (64%)

Figure 9: Occupations with the highest proportion of workers with strong or very strong

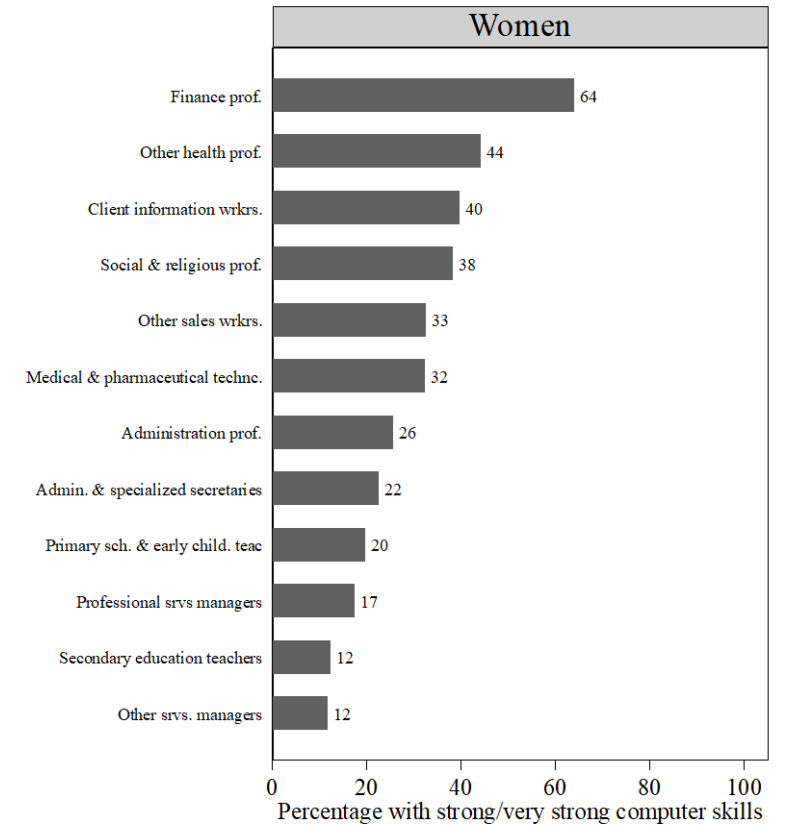
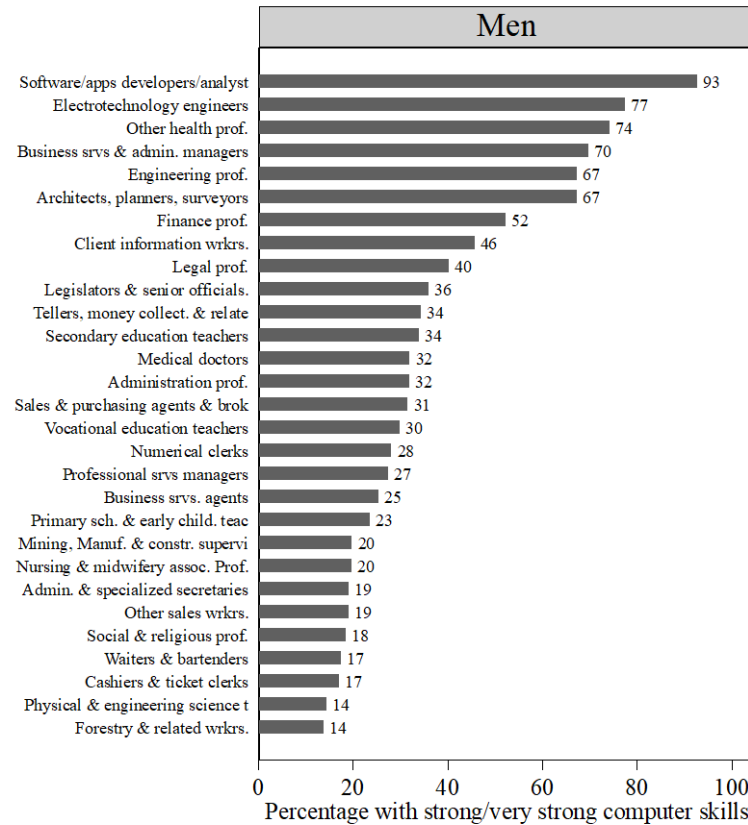
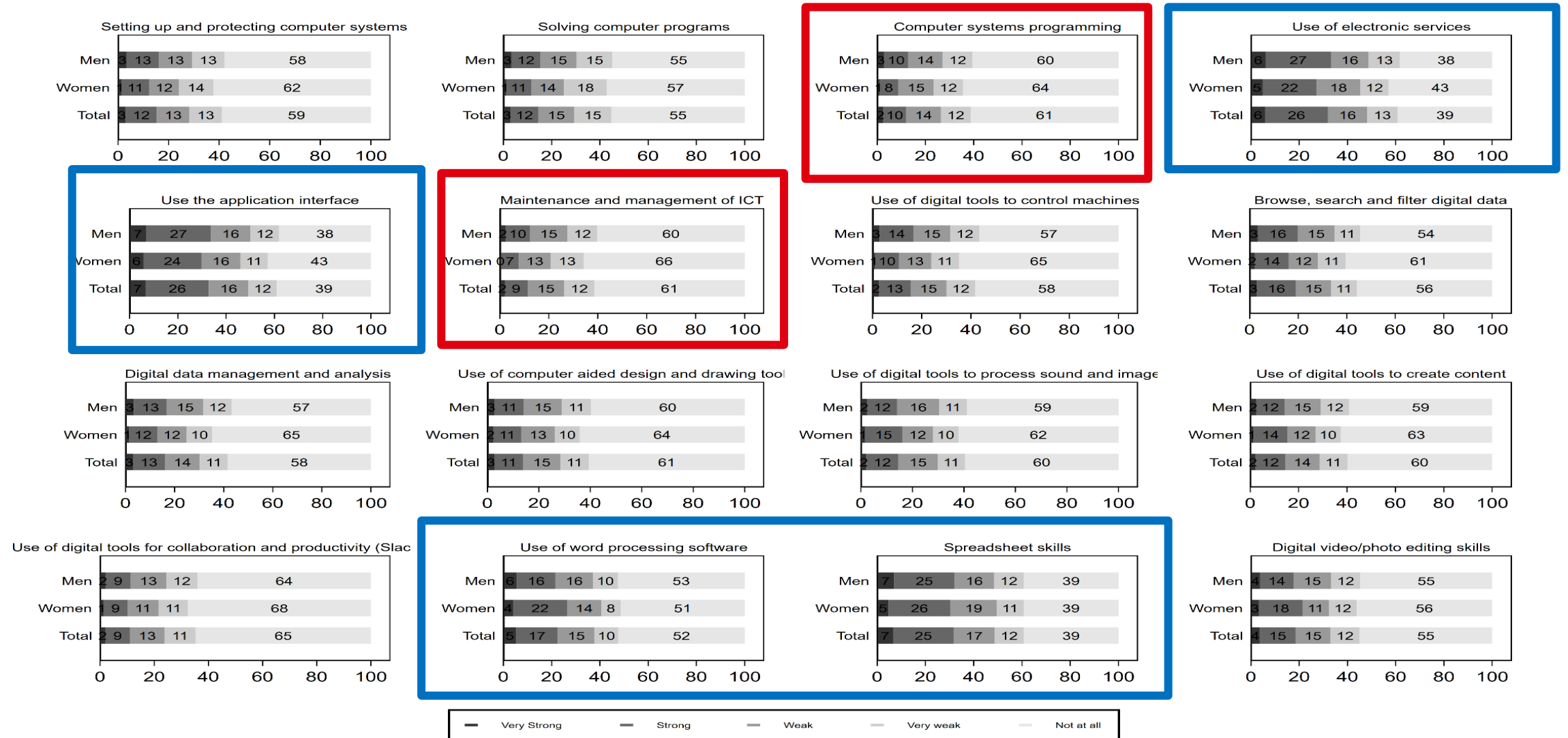


Figure 10: Distribution (%) of computer skill proficiency by type of computer skill and sex, among employed individuals, ages 15-64



04.2. WORKING IN JOBS REQUIRING COMPUTER SKILLS

- **Computer skills required by jobs** = relatively objective measure for computer skills requirements in the labor market
- 12% of the currently employed are in jobs requiring computer skills.
- Women are more concentrated in jobs requiring computer skills (15%) relative to men (12%).
- Counterintuitive 2018-2023 downward trend in % of workers in jobs requiring computer skills

Figure 11: Proportion of workers in jobs requiring computer skills in 2012, 2018 and 2023 by sex (employed last 3 months, ages 15-64)

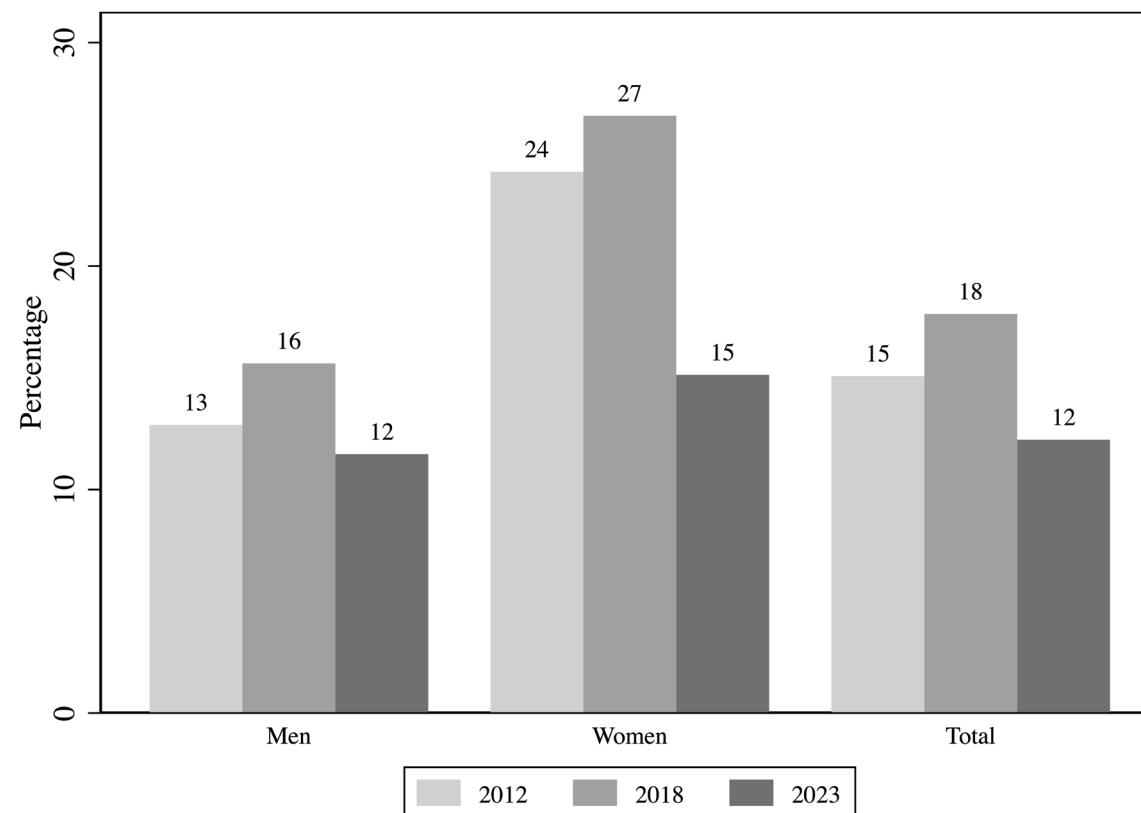
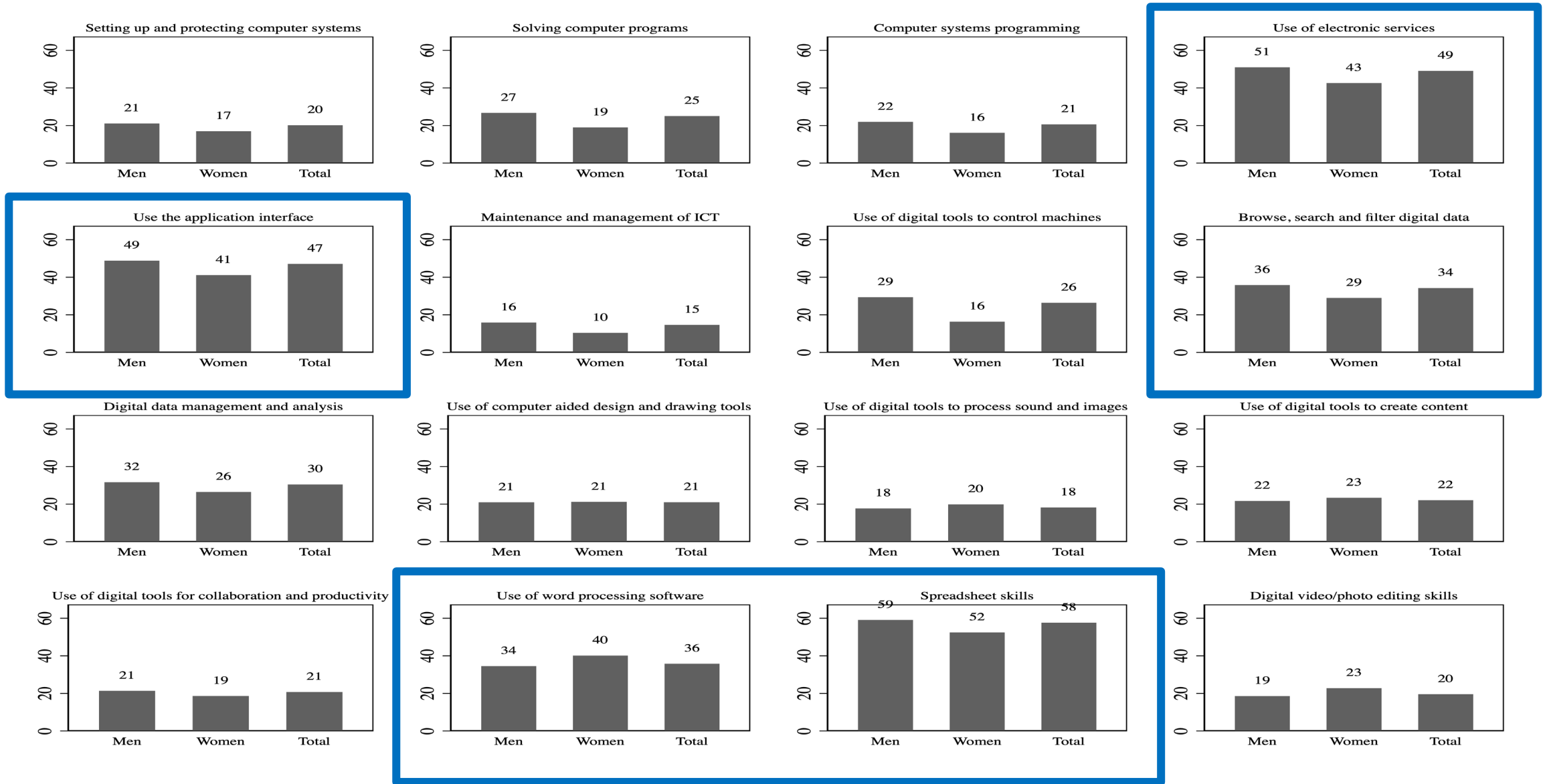


Figure 12: Proportion of workers in jobs requiring computer skills, by type of computer skills and by sex, currently employed, ages 15-64



05. DIGITAL PLATFORMS

- Only 0.4% found work in primary job through digital platform
- Most frequent apps: location-based apps (uber) → 53%

Figure 13: Digital platforms and apps used to find work among those who worked through digital platforms (ages 15-64)

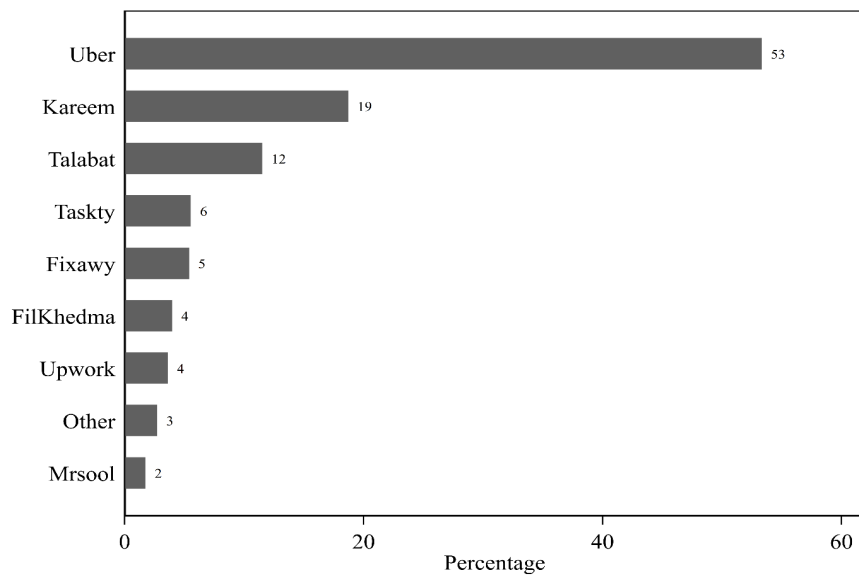
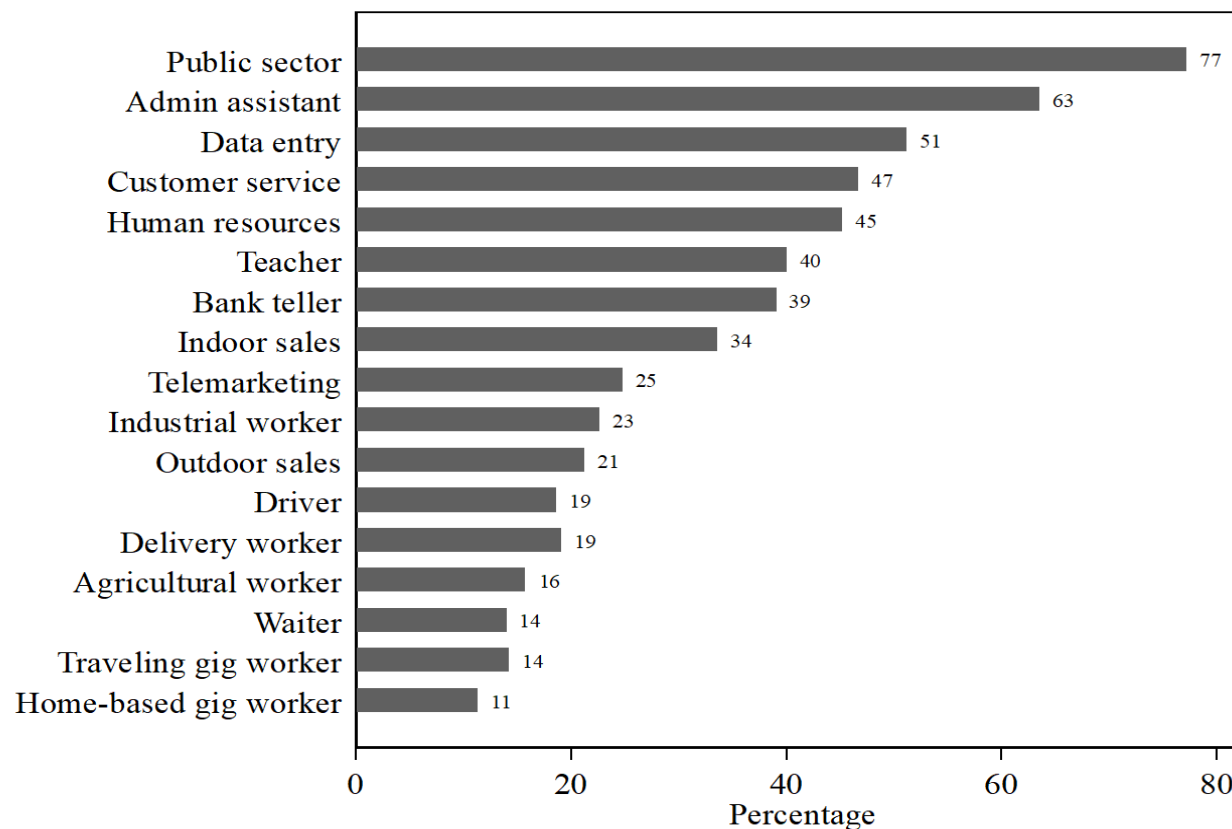


Figure 14: Proportion of workers in ICT jobs in total employment in 2012, 2018 and 2023 by sex, employment, ages 15-64



06. CONCLUSION AND POLICY DISCUSSION

- Noticeable evolution in **use of technology**: decline in computer use without internet + surge in internet use
 - Women's use of computers and internet for work more than men
 - Use of computers and internet more common in formal jobs
 - A quarter of unemployed individuals have strong computer skills
- Investment in digital-intensive sectors
- Expanding technology adoption to other digital-emerging sectors (education & health)
- Promoting and supporting digital entrepreneurship
- Investing in measurements of work through digital platforms

THANK YOU