

Non-technical summary: Digital transformation and labor market inequalities: gender and parenthood perspectives (DiGiQUAL)

The world around us is changing faster than ever before and many of these changes are caused by rapidly developing digital technologies. Traditional human-performed job tasks are increasingly being automated, with some roles completely taken over by robots. The COVID-19 crisis has further ingrained remote work and online meetings as essential aspects of our lives, and these have now become standard practices in the professional world.

In this research project, we want to understand how the digital transformation is impacting the job market, especially for men and women with and without children. We are particularly interested in:

- (i) How the changes in the labor demand (such as a decrease in the demand for routine jobs) affect women's careers after childbirth,
- (ii) How much people are willing to pay for avoiding increased work demands due to the digitalization of work (such as spread all-day working hours, all-day availability), by gender and parenthood,
- (iii) Do the increased possibilities to participate in scientific conferences online lead to a higher participation of women in these meetings.

First, we want to understand how the digitalization of jobs affects women's careers after they become mothers. Studies have shown that technology is changing the kinds of jobs available, with more demand for jobs that are less routine and require creative thinking and less demand for routine tasks. These changes have implications for earnings, with less routine jobs requiring more availability and constant learning, leading to better pay. Routine jobs, on the other hand, don't require skill upgrades and are less paid. We will analyze whether women, who give birth, switch from more demanding and less routine jobs into routine ones. We will also examine whether this change affects their earnings and contributes to the so-called motherhood wage penalty. To do that we will use secondary data coming from the LabFam Individual Biographies (LIB), an open science project that harmonizes family and employment histories for a number of countries, which will be matched with measures of job characteristics derived from the O*NET dataset.

Second, we will explore gender differences in responding to increased work demands, which take a form of e.g. long and spread all-day working hours or being constantly connected to the job. We know from previous research that this can have negative effects on health, life satisfaction, and family time. However, we do not know how much people value their lost opportunities and time due to increased work demands, or in other words how much money they would be willing to give up to avoid them. To show workers' preferences towards avoiding increased work demands we will design an experiment asking workers to compare different job offers and choose their preferred one. Based on the collected data we will derive a measure reflecting the willingness to trade off increased work demands for pay. We will do that by gender and by parenthood status to see whether women, and mothers in particular, are more likely than men to avoid increased work demands.

Last, we will look at how participating in professional events online instead of in person affects the careers of men and women in academia. While online events can be helpful for those who can't attend in person, they might not provide the same networking and knowledge-sharing opportunities. It can be particularly important for women who may not be able to participate in international events due to family/care obligations. We will examine whether the growing availability of hybrid and online scientific conferences impacts the participation of men and women in these events. We will show whether hybrid/online conferences encourage conference participation of women (which could benefit their scientific development) or rather make them shift from onsite to remote participation (which may be harmful to their academic careers). To do that we will use a unique dataset that is currently being collected via web scraping.