

The advancement of digitalization and automation is transforming the labor market and innovation systems on a global scale. However, these changes are not gender-neutral and may either exacerbate or mitigate existing inequalities. The four articles presented in this second part of the special section *Gender and Innovation* identify key trends regarding women's participation in science, technology, and innovation (STI), the impact of automation on labor inequalities, and the importance of designing public policies that promote equity.

The article by Beatriz Rosas-Rodríguez and Enrique Kato examines the challenges faced by women entrepreneurs, particularly in developing countries such as Mexico. The main obstacles include lower educational attainment, higher levels of anxiety and stress, and limited intergenerational mobility. Despite these challenges, the article highlights the importance of fostering women's economic participation, as it can enhance economies' resilience to crises. Studies suggest that women entrepreneurs are driven not only by financial success but also by aspirations for autonomy, personal growth, and recognition. A quantitative analysis based on a nationally representative survey of Mexico reveals that women entrepreneurs encounter more barriers than men; however, they possess the same entrepreneurial potential if obstacles are reduced, and they are given equal opportunities. The study finds that the likelihood of becoming an entrepreneur is influenced by various factors, including age, education level, and intergenerational mobility.

One of the key conclusions is that women with higher educational attainment and an optimistic outlook are more likely to become entrepreneurs. Nevertheless, despite these positive factors, women remain predominantly self-employed, underscoring the persistence of unequal opportunities and the need for public policies to support women entrepreneurs. The article also emphasizes the importance of reducing the barriers women face, such as discrimination and the lack of social support networks. Recommended policies include mentorship programs and the strengthening of women's business networks.

The article by Cecilia Tomassini and colleagues examines gender gaps in academia, focusing particularly on the effects of motherhood and fatherhood on academic careers. It provides a comprehensive review of the literature on the topic, highlighting the multiple dimensions through which caregiving responsibilities impact women's professional trajectories.

The evidence gathered indicates that motherhood has a significant negative impact on women's academic careers, particularly in the early stages. It delays their access to senior positions, reduces their research productivity, and increases the likelihood of leaving academia. In contrast, fatherhood tends to have a less negative effect and, in some cases, may even confer advantages. These disparities are especially pronounced when caregiving responsibilities coincide with critical career transitions, such as the shift from doctoral studies to a stable academic position.

Time-reduction strategies, the pursuit of less demanding roles, and limited international mobility further reinforce these inequalities by restricting women's access to academic networks and resources essential for professional development. The article also underscores the need for more detailed analyses of the relationship between motherhood and academic attrition, particularly given the lack of studies in developing countries, where these dynamics may differ. Additionally, the article points out that conventional measures of academic productivity, typically centered on publications, may not fully capture women's contributions in alternative publication formats. This suggests the need for a more diversified set of productivity indicators. In sum, the study advocates for a deeper understanding of gender inequalities in academia, taking into account personal, social, and structural factors. It also emphasizes the importance of policies that support work-life balance to promote greater equity in the scientific field.

Marina Filgueiras' article examines the persistent gender inequality in science, technology, and innovation (STI) in Brazil, despite progress in women's inclusion in higher education and the labor market. The study highlights that while women have made significant advances in education, their representation in leadership positions and key technological sectors remains limited.

The article also focuses on the use of patent indicators as a crucial tool for monitoring gender gaps in innovation. It reviews how previous studies have employed these indicators and presents new analyses on women's participation in patents in Brazil, based on data from the National Institute of Industrial Property (INPI) from 2000 to 2019. The research reveals that although there has been an upward trend in female participation in patents, women remain underrepresented, particularly in fields such as engineering. However, higher female participation is observed in areas related to biological and health sciences, such as chemistry.

The article provides a detailed overview of women's involvement as inventors in Brazil and underscores the need for public policies that address persistent inequalities, encourage female participation in male-dominated sectors, and promote international cooperation as a pathway to greater inclusion of women in STI activities.

The article by Marta Castilho and Kethelyn Ferreira examines the relationship between job automation and gender inequality in Brazil's labor market. It explores how automation, while potentially improving workers' quality of life, could also exacerbate preexisting inequalities, particularly along gender lines.

The article focuses on several key points. The first is the impact of automation on the labor market. Technological advancements in automation can lead to job displacement, increased job insecurity, or even the creation of new employment opportunities. However, the net effects of these changes remain uncertain and depend on factors such as the sectors in which automation is implemented, the skills in demand, and the distribution of the economic benefits generated.

The second point concerns the gendered nature of automation. Automation is not gender-neutral. Digital skills, which are crucial for taking advantage of technological opportunities, are unevenly distributed between men and women, limiting women's ability to integrate into emerging labor markets.

The third point examines the occupations most vulnerable to automation. Using an occupational automation probability model, the study finds that women's jobs are less likely (42%) to be automated compared to men's (56%). However, the jobs most susceptible to automation tend to be low-skilled and poorly paid—fields where women are overrepresented, such as domestic and care work. These occupations, though less likely to be automated due to the cognitive and emotional skills they require, are often informal and unpaid, making them undervalued and discouraging automation.

The fourth point addresses the persistent gender wage gap. Men are generally employed in higher-status, better-paying jobs. Moreover, even in female-dominated sectors, men tend to earn higher wages than women in the same roles. The final point highlights the challenges women face in accessing jobs created by automation. Barriers include limited access to digital infrastructure, lower levels of digital literacy, and underrepresentation in STEM (science, technology, engineering, and mathematics) fields. Additionally, the burden of unpaid domestic and care work remains a major obstacle to women's participation in the automated labor market.

In conclusion, the article suggests that public policies must address these inequalities by promoting women's access to digital skills, supporting their inclusion in high-tech sectors, and ensuring proper recognition and valuation of unpaid and feminized labor.

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