

H.05. Gender inequalities in STEM education and the labour market: evidence, determinants, and interventions

From Bachelor to Master Degree: The Choices of STEM Graduates

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The gender gap in STEM disciplines in Italy is a persistent issue and, despite the growing interest in these subjects over the last decade, the underrepresentation of women continues to persist. The Global Gender Gap Report (2023) highlighted that Italy's overall position has moved from 63rd place in 2022 to 79th place out of 146 countries in 2023. It seems this is mainly due to the participation of women in politics. However, a slight improvement was recorded regarding economic participation and opportunities.

According to ISTAT (2018), only 20% of graduates in STEM in Italy are women. This is significantly lower than the European average (around 40%, Eurostat, 2017). Several studies have sought to investigate the causes of this gap. Some have highlighted the importance of socio-cultural factors, such as gender stereotypes and social expectations (Nosek et al., 2009). Others have emphasised the importance of education and school orientation (OECD, 2015). However, most of these studies are based on aggregate data at the national or regional level, which can mask important differences at the local level (Blickenstaff, 2005). Moreover, few studies have examined the gender gap in STEM in Italy using advanced statistical methods (ISTAT, 2018).

In our study we refer to the data processed in accordance with the Research Protocol for the Study "From high school to the job placement: analysis of university careers and University mobility from Southern to Northern Italy" among the Ministry of University and Research, the Ministry of Education and Merit, the University of Palermo as the lead institution, and the INVALSI Institute. The reference researcher is Massimo Attanasio. Data concerns the whole individual information about any student enrolled at a public university in Italy, since 2008. In addition, just only for the students enrolled at the University of Palermo, data are linked to the results of the AlmaLaurea annual survey on graduates' university experience and job placement.

Thanks to this huge database, we focused on the choices of bachelor's degree graduates regarding continuing their studies or going to work. Particular attention has been paid to STEM first and second-degree programs and gender differences. The use of multivariate techniques allowed us to discern the student characteristics most associated with the pathway choices made.

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