## The Halo Effect in the Classroom: Do Similar Students Receive Higher Grades?

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A vast body of literature finds educational outcomes of university students to be highly uneven and to be associated with subsequent inequalities in the labour market. The most frequently investigated drivers of unequal performances - both during and after education - are socioeconomic background, gender and ethnicity. Many empirical studies find that they can explain a part of the negative gaps in the education performances or wages, but also that another part of these gaps remains overall unexplained. Alongside individual student characteristics, also university-specific factors (Bandiera et al. 2010) and peer effects among students of the same and adjacent cohorts (Oosterbeek & Van Ewijk 2014; Patacchini et al. 2017) have been shown to have a significant impact on academic success. Likewise, individual characteristics of professors, and common student-teacher traits in particular, may influence student achievements potentially leading to more favorable student outcomes. Borjas (2000) observes differentiated effects according to the nationality of teaching assistants and students; Dee (2005) shows that mismatches in ethnicity and gender negatively affect teachers' perceptions of student performance, while, on the other hand, Muralidharan & Sheth (2016) find positive reinforcement effects of female teachers on the achievement of female students. Italy represents a challenging context within which to examine the similarity effect, particularly in the sector of tertiary education. The strong internal North-South mobility (Impicciatore & Tosi 2019), the increasing presence of foreign-born students over the past two decades (Colombo & Santagati 2010) creates a diverse student body with varying backgrounds. This along with the more recent policy efforts of recruiting and retaining women in STEM degrees and occupations draws attention to potential asymmetries in performance of these minorities (Aina 2013; Bonizzoni et al. 2016). The Italian context, with its strong regional identities and cultural differences, also offers a unique opportunity to study potential heterogenous effects of the halo. For instance, the impact of shared gender and cultural background may be stronger for certain regional origins or academic disciplines. To define the demographic dimensions (gender, age, geographic origin, and nationality) for both students and professors, we exploit comprehensive dataset of the University of Modena and Reggio Emilia (Unimoredata) which links student administrative data other data sources, such as secondary survey data (Almalaurea) and student entry test results (TOLC database). From a methodological viewpoint, the latter enables us to validate and follow the value-added approach described in Chetty et al. (2014a; 2014b), which measures teacher effectiveness on student performance separating between- and within-instructor variations. Our initial analyses reveal that student-professor similarity does indeed influence marks with notable heterogeneities based on gender, field of study and cultural background. We observe for example that female students tend to receive higher marks from female professors in STEM fields while the opposite appears to be true in the humanities. In line with the literature under analysis, a positive impact of "assortative grading" on academic performance is expected. What is less straightforward

are the heterogeneities and interactions - as well as their policy implications - between opposite sexes and different cultures. The policy recommendations of our findings are directed towards the recruitment procedures of new professors on one hand and targeted student support of disadvantaged groups during their study career on the other.