Postdoctoral position on "Gender Gaps in Engineering: Exploring Underlying Mechanisms"

The **Pontificia Universidad Católica de Chile**, ranked first in QS Latin America University Ranking 2022, invites outstanding candidates for a full-time postdoctoral position. This position, supervised by Prof. Fernanda Ramírez-Espinoza, focuses on studying the underlying mechanisms that generate gender gaps in STEM, examining the educational trajectories and Engineering field choices of female Engineering students. This opportunity is part of the UC-Chile call for 35 postdoctoral positions, detailed in this document, and is among the 50 pre-selected applications out of 138.

Motivation
Gender gaps in achieving educational outcomes have reduced or even reversed in many high-income countries and in Latin America (Goldin, 2002; Goldin, Katz, & Kuziemko, 2006; Duryea, Galiani, Nopo, & Piras, 2007). However, significant occupational segregation persists, with men overrepresented in highly lucrative fields such as science, technology, engineering, and mathematics (STEM), even when accounting for differences in ability (Schneeweis & Zweimüller, 2012). It is essential to have more well-identified evidence on how gender biases affect educational spaces, as the underrepresentation of women in STEM negatively impacts women throughout their lives (Kirkeboen, Leuven, & Mogstad, 2016; Lavy & Sand, 2018; Porter & Serra, 2020). Additionally, it deprives STEM fields of valuable talent and may result in a loss of productivity (Hsieh, Hurst, Jones, & Klenow, 2019).

Although there is a strong literature that studies the mechanisms that drive talented female students away from STEM, the question of gender segregation *within* STEM fields remain understudied. This is an important subject, as majors serve as signals to employers about graduates' training, career orientations, and likely fitness for particular jobs (Bostwick, 2016; Quadlin, 2018; Roksa & Levey, 2010). In the Chilean context, we observe some gender segregation in the Engineering fields, which could lead to differences in educational and labor market outcomes.

The postdoctoral fellow will study gender biases in STEM, focusing on how the gaps are maintained and reproduced during the years of undergraduate and graduate Engineering studies. Using quantitative analysis of administrative data from university records (surveys, grades, course selection), the fellow will analyze the trajectories of male and female students, exploring the dynamics of gender gaps within the various areas of engineering.

Requirements

Applicants must have earned a Ph.D. degree at the time of the beginning of the appointment in areas related to the topic of the project, including Education, Economics, Public Policy, or others that cover Educational Policy, Impact Evaluation and/or Causal Inference. Previous experience in research, having used quasi-experimental methods to study educational trajectories and/or gender gaps is highly valued.

From a methodological standpoint, the candidate will use quasi-experimental methods to analyze individual-level data on students' educational choices after being admitted to STEM majors in Chile. The postdoctoral fellow will review the literature on gender gaps in Engineering fields, examine available administrative data sources (both from the [government](#) and the university), and use descriptive statistics and causal inference techniques to characterize gender gaps in students' trajectories in Engineering. The research will also test hypotheses about the causes of these gaps emerging to inform the design of initiatives aimed at closing gender gaps within the School of Engineering. This work aligns with the supervisor's agenda on closing gender gaps in STEM more broadly – something that is also of interest for this research, given the close relationship in admissions between Engineering and other majors in the university (e.g., [Math and Science Bachelors](#) from the College, [Bachelors on Engineering in Data science](#) from the Institute of Applied Mathematics, among others).

The candidate is expected to carry out applied projects with public and private entities and to disseminate the results of the activities to agents outside academia.

Deadline for application: August 15th, 2024

APPLICATION MATERIALS (IN ENGLISH)
Applicants should submit the following documents to the [online platform](#):
- Letter of interest (highlighting the candidate's fit with the call and including publications, grants, undergraduate and graduate teaching, professional service, etc.).
- Curriculum Vitae
- 2 reference letters (can be sent independently by the recommender)
- A mini-research proposal, including a summary of the state of the art, objectives and methodological overview (maximum 1 page plus an additional page for bibliographic references). This mini-proposal will be used in the initial evaluation process and does not necessarily represent the final proposal that will be sent to the institutional call.