

## **WOMEN in STEM: diversity, inclusion, and equality in TECH universities – 'role models' impact**

The essence of maintaining the principle of equality in the workplace is equal access to positions and remuneration for people with similar qualifications, regardless of their gender, age, or race. In terms of gender balance, due to the culturally entrenched patriarchy, many barriers, not so much formal but mental, make it difficult for women to develop their professional careers freely; this is particularly acute in the fields of exact sciences. Although more and more women graduate in science, unfortunately, they do not decide to take up a job that is consistent with their education. Therefore, this project aims to identify and measure the impact of factors and experiences young women gain while studying STEM (science, technology, engineering, and mathematics) that determine their career choices.

Moreover, this project is also oriented toward overcoming barriers related to mentally established professional role models in science. For example, the established professional model of a person caring for the sick is a nurse (woman), children: a kindergarten teacher (woman), and bread rolls are baked by a baker (man); science, and especially engineering, is usually handled by a man. This mental pattern constitutes a significant limitation for women's education and professional development in science. Stereotyping professional role models with gender attributes is equally harmful to women and men. Gender is not a determinant of intellectual potential or 'pro' or 'anti' inclusive behaviors. It is equally possible for women to support patriarchy in STEM as it is for men to support women's inclusion in STEM. Hence, this project focuses also on diagnosing factors and experiences related to 'model roles' determining young women decisions regarding their career paths.

Gender diversity positively impacts organizational performance, innovation, and sustainability. So, identifying key factors determining women's active presence in STEM matters for STEM development.

In summary, **this project aims** to identify and measure the impact of various factors and experiences that young women encounter while studying STEM fields, as well as how these influences shape their career choices later on. The experiences of role models play a significant role in these decisions, and this aspect is included in the project's scope.

### **Key research questions:**

*Q1. What factors and experiences enhance or hinder women from pursuing a STEM career just before or after graduation?*

*Q2. What are the key characteristics of women who choose to leave or remain in STEM after graduation?*

*Q3. Which experiences, including contact with model personalities, next to circumstances or factors (Q1), have the most substantial impact on women's decision to pursue (or not) a career in STEM after completing their studies?*

*Q4. What are the key characteristics of "role models" and "anti-role models" that determine their positive (or negative) impact on young women and their choices to pursue (or not) a career in STEM?*

### **Expected benefits:**

Examining the background of women's motivations to stay or leave STEM after graduation is critical to improving the rate of women choosing STEM career paths. Since gender diversity positively impacts organizational performance, innovativeness, and sustainability. A deeper understanding of women's motivations to stay or leave STEM enables us to use the project's knowledge to benefit STEM sector development. The key social benefit lies in long-term fostering synergy between men and women in STEM, enhancing their individual and gender-related strengths, and the ability to foster collective growth and collective intelligence building in STEM organizations to finally support the advancement of the entire STEM sector.

**The project aims directly to correspond to the UN Sustainable Development Goals, which focus on promoting equal conditions and decent work for all.**