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Doctoral Dissertation  
Doctoral Program in Management, Production and Design (38<sup>th</sup> Cycle)

# **Understanding organizational change towards gender equality in STEM**

An exploration of Gender Equality Plans in technical universities

Greta Temporin

## **Summary**

This thesis aims to explore the phenomenon and conditions of strategizing for organizational change towards gender equality in the context of Science, Technology, Engineering and Mathematics (STEM), focusing on technical and STEM-oriented universities in the European Union (EU). Building on literature on gender inequalities in organizations, specifically in STEM contexts and academia, and on organizational change, it provides an exploration of current approaches and practices of change, highlighting both tensions and potential enabling factors.

The thesis is divided into three studies. The first part wants to provide an in-depth exploration of the context of technical universities, looking at how inequalities substructures might unfold in the lived experiences of STEM academics according to their gender. Using gendered organization theory and specifically the ideal worker norm, the study tries to outline the characteristics and impact of the “ideal STEM academic” model, through semi-structured interviews with STEM researchers at different stages of their career. The findings highlight how women STEM academics are subject to a higher sense of detachment between their personal view of science and research goals and guidelines, and the norm promoted by academia and the organization they belong to.

The second study shifts the focus from the lives of individual STEM academic to the organizational change strategies employed by technical universities. Gender Equality Plans (GEPs) come under scrutiny, as the main tool promoted by the EU institutions to prompt a change towards gender equality in Research & Innovation (R&I) institutions, including technical universities. By a qualitative analysis of nine GEPs from EU technical universities, the research highlights how these organizations are responding to the institutional pressure towards gender equality. In particular, it is highlighted the role of building organizational responsibility through an Equality, Diversity and

Inclusion (EDI) infrastructure that can sustain change in the long-term. This infrastructure is mainly composed of participatory bodies and EDI-dedicated professional roles, but it is also complemented by building internal knowledge on gender-related organizational dynamics and integrated planning. However, findings also highlight how these GEPs still showcase little critical analysis of the specificities of STEM when it comes to sustaining gender inequalities.

The third and fourth chapters are dedicated to the examination of the planning stages of two GEPs, one in an Italian technical university and another in an Italian municipality. The comparison make an interesting ground for knowledge transfer of how organizational change strategies are developed in two different, yet similar public organizations. Both the studies adopt a practice-based perspective to look at the participatory development of the GEPs through an ethnographic-inspired, observation study. Results shows how in both cases the GEP provided the opportunity to build a Community of Change within the organization, creating a sense of identification in the GEP's goals and values and a space for mutual support for different EDI workers and activists. Yet, persistent practices of inequality or counter-change were visible through the observation, tied to the characteristic of the organizational context and the role of building and sharing gender knowledge and meanings. The conclusions highlights how GEPs can be labelled as potential sites of learning how to do equality work and organize for change, through non-linear, contradictory practices of community-building.

