THE "GEA - GENDERING ACADEMIA" PROJECT

Project's Description and Research Questions

The GEndering Academia (GEA) project aims to analyse gender asymmetries in Italian academic careers both in STEM (Science, Technology, Engineering and Mathematics) and SSH (Social Sciences and Humanities) disciplines. The main goal is to understand whether and in what ways gender differences and inequalities are (re-)produced at various stages of academic careers and how the micro (individual), meso (organisational) and macro (norms and policies) levels interact in supporting/hindering career success, from recruitment to retention and career advancement.

The GEA project focuses on three main research questions.
i) What is the role of differences at the individual level (between male and female researchers) in terms of aspirations, motivations, constraints and strategies in entering, pursuing or quitting academic careers (i.e. micro level)?
ii) What is the role of academic institutions (i.e. Departments, councils, committees at the national or local level) with respect to final decisions concerning recruitment of young researchers (PhD holders) and promotion of associate professors (i.e. meso level)?
iii) What are the impacts of the national (and supra-national) rules governing recruitment and promotion in the Italian university system on gender inequalities (i.e. macro level)?

Our general hypothesis is that there are multiple dimensions at work on each level: the cultural dimension (employees' and employers' values, gender norms, preferences and stereotypes; organisational cultures, workplace time practices and leadership styles; prevailing gender norms at the region/country level); the structural dimension (income and time resources of individuals and their families, their assets in terms of human, economic and social capital; workplace time schedules and work organisation); the institutional dimension (the rules governing academic recruitment and retention processes, and labour market and family policies at local, region and country level).
The Project involves 4 Research Units – University of Turin, University of Palermo, University of Sassari, University of Trento – and aims at exploring in four Italian Universities of different size and geographical location, both in STEM and SSH Departments:

i) the early career paths of male and female PhD holders, highlighting the mechanisms which support "gender neutral" recruitment and retention, and those which contribute to the "leaky pipeline" phenomenon;
ii) the career strategies adopted by male and female associate professors competing for a full professorship;
iii) the effects of selection procedures and practices on inequalities in promotion.

Methodology

Given the complexity of factors and levels involved in the construction of gendered academia, *a mixed-method approach* will be adopted. It will be based on quantitative and qualitative methods:
1) statistical analyses of national secondary sources (ISTAT and MIUR data on PhD holders' occupational outcomes, as well as MIUR data on academic career progressions);
2) a web survey of all research and teaching staff of the four universities in order to collect objective and subjective data on individuals' academic careers;
3) in-depth interviews with female and male researchers at early and middle stage of their carreer to identify the "push" and "pull" factors behind the gender imbalance in recruitment, career advancement and decision-making processes;
4) semi-structured interviews with key informants at the centre of selection processes.

Individual careers (*micro level*) are investigated through quantitative and qualitative analyses and contextualised by reconstructing the macro and meso levels on which gender is constructed in academia. We first conducted a statistical analyses of existing data sources: the ISTAT surveys on PhD holders, and the MIUR databases of PhD holders (from selected cohorts) and current (and past) academic staff. These large-scale, nationally representative data sources, however,

do not provide subjective data. Thus, we are complementing them with data from a web survey of all research and teaching staff working in all the departments of the four universities involved in this project. The web survey projected with LimeSurvey collects objective information (individuals' characteristics) and subjective data (attitudes, motivations, intentions and reported past behaviours) regarding seven main topics: 1) past career (within and outside academia); 2) current job; 3) mobility and publications; 4) past and current personal and family life; 5) positive and normative beliefs regarding career progression; 6) the department in which the respondents currently work; 7) future prospects.
In order to gain better understanding of the mechanisms and processes underlying the behaviours and attitudes recorded, a qualitative study is being conducted. It focuses on one STEM and one SSH department of each university involved. A set of 32 in-depth interviews will be carried out in each university (16 in each Department, both with men and women) (totalling 128 interviews).

On the meso level, the focus is on organisational (gendered) cultures, and on how recruitment/selection/evaluation procedures have changed within a selected number of academic institutions (i.e. Departments) since recent university reforms. To obtain insight into decision-making processes and governance, semi-structured interviews (approximately 80 interviews in total, 20 for each University involved) with key informants – such as HR managers, members of existing selection boards, the academic senate and equal opportunities bodies – are being conducted.

On the macro level, we consider the main university reforms and the current national university legislation regulating recruitment and promotions, as well as national/regional institutional settings affecting individuals' constraints and strategies (labour market regulations, equal opportunity laws and social policies, including reconciliation and care measures, and income support measures to compensate for job insecurity).

Research Activities

The project is made up of six Work Packages (WP). Below we briefly describe them and indicate the RUs that collaborate to their accomplishment (see also Figure 1).

WP1 – Mapping the macro-context

WP1 situates gender asymmetries in academia within the wider societal and institutional setting. More specifically, WP1 provides a detailed analysis of:

A. national university legislation changes on recruitments and promotions, national decisions concerning research funds for state universities, and the main national and European policies/directives on equal opportunities in the academic context;
B. relevant national regulations and policies (labour law, equal opportunity laws, family-work reconciliation policies, income support measures).

WP2 – Assessing gender imbalances: establishing the phenomena

WP2 provides a quantitative analysis using both available statistical information and by creating a new data set (web survey) in order to assess the magnitude and nature of the two phenomena: Leaky Pipeline (LP) and Glass Ceiling (GC). WP2 revolves around three tasks:

A. To investigate the LP phenomenon using the ISTAT and MIUR data sources;
B. To investigate the GC phenomenon analysing data from the MIUR database;
C. To investigates both LP and GC phenomena using data from the web survey.

WP3 – Analysing the organisational context

By means of desk research and semi-structured interviews with key informants in recruitment and governance bodies, WP3 accomplishes the following four tasks:

A. map the data already available in each university. The aim is to understand the data collection policy applied, its gender (in)sensitivity, and the kind of picture it provides about the gender system across the area which is the main focus of the project (recruitment, career advancement, gender composition of decision boards, the inclusion of the gender dimension in teaching/research programmes, etc.).

B. analyse the governance of each university involved, the aim being to emphasise the interplay between national or European constraints and specific local responses, and identify how existing models of governance are gendered. In particular the analysis focuses on: a) the extent to which national and European laws on equal opportunities are applied; b) the way in which gender is institutionalised.

C. analyse gender practices in STEM and SSH disciplines on an organisational level, in order to understand, on the one hand, gendered organisational cultures and the processes by which symbolic gender orders are produced and reproduced; and on the other, the gendered organisational structure and the ways in which gender is embedded in the work organisation, the type of (maternity/parental/career) leave available, workplace time schedules, etc.;

D. highlight gender implications in the construction of excellence criteria in academia, by identifying: (i) the existing formal criteria which portray the "ideal candidate" for various research positions moving up the career ladder, and (ii) the way in which academic boards construct the attribute of "excellence", based on a gendered subtext.

WP4 – Understanding early career paths: the leaky pipeline phenomenon?

WP4 investigates the mechanisms underlying early career paths by means of in-depth interviews with those who obtained their PhDs after 2005, in one STEM and one SSH department of each university in the network. WP4 carries out two main tasks:

A. design a consistent, exhaustive interview script focused on career paths and experiences, attitudes, motivations and prospects about academic work and careers, opportunities and constraints of PhD holders.

B. analyse interview transcripts, using dedicated software for qualitative data (i.e. Atlas.ti or Nvivo).

WP5 - Understanding career advancement paths: the glass ceiling phenomenon?

WP5 analyses gender gaps in regard to access to apical positions, conducting in-depth interviews with those who became associate professors after 2005. WP5 is meant to:

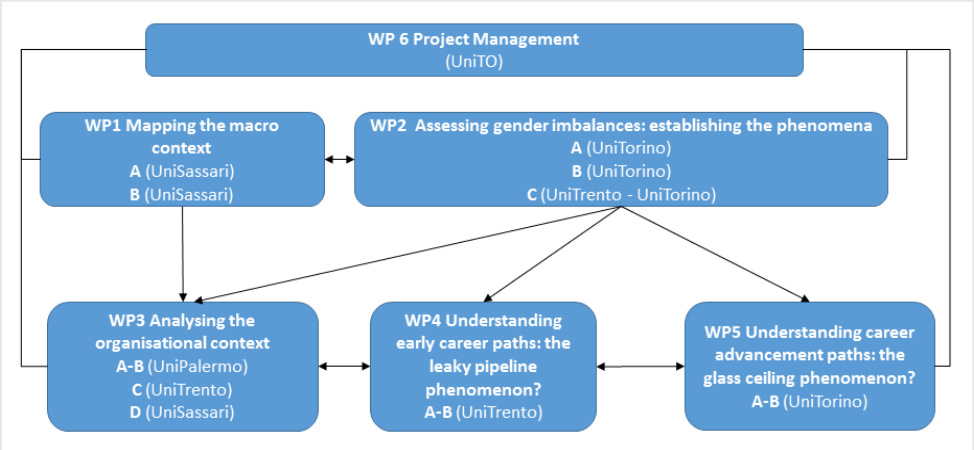
A. design a consistent, exhaustive interview script following the same topics as in WP4.A (for associate professors);

B. analyse interview transcripts, using dedicated software for qualitative data (i.e. Atlas.ti or Nvivo).

WP6 – Project Management

The overall project management of GEA is assigned to the university of Torino RU. Thanks to an ongoing process of knowledge sharing, debate and discussion among scholars from different disciplines, the project is forging a solid research network, the ideal starting point for high-quality scientific output, with the prospect of taking part in new research projects and academic networks at a national and international level.

Figure 1. Graphic representation of the GEA project's Work Packages and RUs distribution



Relevance

Despite the progress that has been made in recent years and the increasing attention paid to the issue since the *Lisbon Agenda* and the creation of the *European Research Area* in 2000, achieving gender equality in various workplaces and professions, including academia, remains a major challenge. The challenge is based on a new awareness of the strategic value of *gender equality as a contribution to (Europe's) Knowledge Economy* for two main reasons: research excellence requires accessibility, resources and advancement opportunities for the best researchers irrespective of gender; innovation demands the diversity of perspective and input that is possible from a truly diverse research pool. Thus, understanding and tackling the factors producing gender imbalances has positive outcomes in terms not only of equal opportunities but also general efficiency and excellence (European Commission 2009; 2012; 2013).

There are several reasons why it is important to focus a research study on gender inequality in Italian academia.

Firstly, the *higher education sector is a key axis of the European research sector*: universities are the foundation of research development and a focal point for original research and innovation (R&I). Yet, while female university students perform better than their male counterparts, the situation suddenly changes in postdoctoral fellowship positions and further worsens throughout the subsequent stages of academic careers. Indeed, the gender structure of the Italian academic hierarchy has still the classic *scissor pattern* illustrated in *She-figures* (European Commission 2018): while in 2003 only 16% of full professors and 31% of associate professors were women, the figures for 2016 were 22% and 37% respectively. Therefore, the gender gap at various academic positions has remained substantial over time in Italy, with the slight increase due more to the retirement of male professors than to a larger number of women entering academia.

Secondly, *academia is a privileged arena* for studying gender differences at work, given that the specific field of research, where a great deal of human capital is invested, is purportedly exempt from any kind of discrimination, being exclusively based on rationality and merit. The *Italian academic context is of particular interest* because, over the past decade, the rules governing both recruitment and promotion have changed profoundly. In particular, the increased flexibility of the labour market, the lack of protection measures for researchers in precarious jobs, severe budget cuts at the national level and the fact that staff turnover has been limited by law (since 2009) have greatly reduced the number of permanent teaching staff (Azzolina, Pavolini 2015). Moreover, the new recruitment rules have increased the level of job insecurity, one of the most significant barriers to pursuing a research career. Finally, the new rules (apparently more 'gender neutral') have not reduced the disadvantages suffered by women in career advancement (Goastellec, Vaira 2017). In short, the gender gap is a persistent phenomenon in Italian academia over time and across different scientific fields, analogously to the low number of women in academic governing bodies (Bozzon et al. 2015).

Moreover, the GEA project is innovative for several reasons.

First*, it focuses on both men's and women's careers*, in the awareness that the situation for women will change if that of men changes as well. This calls into question the "unconditional worker model" that currently dominates academia and public discourse (Rees 2011). This implies that it is not possible to encourage the "commodification" of women (i.e. favouring their economic *independence* through paid work) if not matched with the "de-commodification" of men (i.e. ensuring rights for care work to both men and women alike).

Secondly, GEA addresses gender inequality issues in scientific careers by highlighting not only the lack of women in *apical positions*, usually the focus of research on gender and science, but also by analysing the *early stages of careers*, in order to understand how gender differences emerge and the main reasons why women and men stay in academic careers or leave them.

Thirdly, the project adopts a broad horizon which ranges from an *exclusive focus on STEM disciplines* where women are clearly under-represented to *more highly feminised sectors, like SSH.* This comparative approach will yield a detailed picture of the effects of different academic organisational cultures, and it will show how discrimination processes operate in both types of environments.

Fourthly, by setting up a multidisciplinary team (including sociologists, economists, and political scientists) and by comparing different types of organisational models in different academic disciplines within various regional contexts, GEA aims to investigate the interplay among different factors at *the micro, meso and macro levels of analysis* and untangle the roles of cultural, structural, and institutional barriers.

Future Developments and Policy Recommendations

The GEA Project has the ambitious goal of enhancing tools and policies designed to counter gender asymmetry in recruitment procedures and career advancement, promoting gender equality in the Italian academy consistently with: the objectives of gender equality promotion of the European Research Area (ERA) (2018), the MIUR's Indications for Positive Actions on Gender in Universities and Research (2018), the CRUI's Guidelines (2019) for the Gender Budgeting in Italian Universities, the European Commission's guidelines (2020) on the necessity of implementing Gender Equality Plans (GEPs) in every research institution to have access to the Horizon Europe funding programme.

The planned WPs are pragmatically designed to support the involved universities, but also to propose more general policy recommendation for the development of organisational initiatives and strategies that enable gender to be taken into account at all stages of research careers, focusing on:

- *recruitment and selection*: on the basis of the results, self-tailored guidelines for both STEM and SSH disciplines will be formulated, in order to provide recommendations for achieving gender balance in both the early stages of academic careers and later on. Gender-sensitive guidelines for academia will include strategies for building a consistent, competitive career. Moreover, in order to foster transparent, impartial selection procedures, a toolkit for combating the gendered construction of excellence in academic recruitment and selection procedures will be offered;

- *working conditions and organisational culture:* by investigating working conditions, organisational cultures and work/family issues, the project will formulate recommendations aimed at countering gender bias in the everyday working lives of researchers at different stages of their academic careers, and it will propose flexible and family-friendly working conditions and arrangements for both women and men in academia;

- *monitoring and management measures*: the GEA project will work to increase knowledge on gender differences in academic careers in different regional and organisational settings, in both STEM and SSH disciplines, starting from a quantitative mapping of individual careers in the four universities involved. By collecting data on all the STEM and SSH departments in each participating university, GEA will provide also through the construction of appropriate indicators a deeper insight into different dimensions of the professional and private/family lives of male and female researchers at the university level.

The results of the research will contribute to existing strategic plans at university level and integrate (or create) gender equality plans (GEP) with specific measures for both tenured and non-tenured academic positions, and women and men. This will also benefit management in so far as it will raise awareness of and reinforce the role of the bodies/organisations in charge of monitoring the long-term effects of such measures, proposing adjustments if needed.