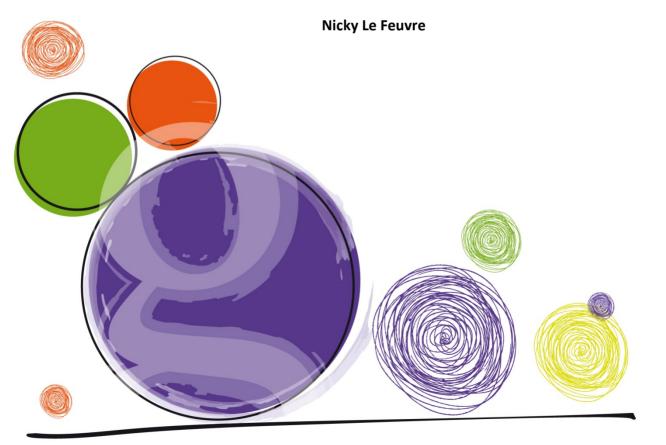




Contextualizing Women's Academic Careers in Cross-National Perspective







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Department of Sociology and Social Research













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INTRODUCTION

Despite recent improvements in the collection, compilation and dissemination of quantitative data on women's academic careers in the European context (notably through the European Commissions' SHE Figures publications), we have not progressed much in understanding the mechanisms behind women's limited role in the production and dissemination of scientific knowledge. Although comparative data is more widely available today than in the past, it remains the case that much of the research on women in scientific professions lacks a theoretically grounded cross-national comparative perspective. As Maria Caprile and her colleagues have noted "In general, comparative research (across countries, scientific fields and institutional sectors) is scare and a descriptive approach prevails" (Caprile et al, 2012: 16). Therefore, although the research on this topic is generally situated (in so far as publications usually mention the country, disciplinary field, type of academic institution under consideration), the data presented is rarely fully contextualised, making cross-national comparisons of women's experiences in scientific occupations somewhat hazardous.

The aim of this comparative report is thus to identify the structural characteristics of the sexual division of - paid and unpaid - labour in each national (local) GARCIA context and to suggest how this may effect women's access to and experiences of academic professions. We are particularly interested in showing whether (or not) women are expected to maintain continuous and full-time commitment to the labour market over the entire course of their adult lives; whether or not they are presumed to have main responsibility for domestic and care activities and whether or not measures exist to facilitate the combination of work and personal / family life, either at the national or institutional level. This task is particularly important, given that the majority of the countries represented in the GARCIA consortium are rarely studied directly in the existing welfare regimes literature (Esping-Andersen, 1990, 2009). For example, we believe that the structures of opportunity and constraint offered by various welfare provisions will influence the conditions under which men and women aspire to working in science and evaluate their chances of access to the academic labour market. Likewise, we expect national (or local) gender norms to shape the expectations that well-qualified women (and their friends and family) have about their future career prospects and their employment and family formation patterns. They will also influence the ability of men and women to combine a more or less demanding academic job with a satisfactory level of investment in other aspects of their lives (Fuselier & del Rio Carral, 2013).

This report thus provides an overview of the main findings of the National & Local Policy reports produced in January 2015 by each GARCIA institution (Le Feuvre, 2015a). Rather than summarising the data collected on each of the five policy domains (education, employment, family formation, care and equal opportunities), we have chosen to structure our comparative synthesis around a number of significant observations. These provide a set of "contrasting cases" that enable us to illustrate the complex combinations of multiple dimensions of national gender,

employment and care regimes that are likely to impact on women's academic careers.

The primary aim of this comparative analysis is to provide sufficiently contextualised knowledge about the social mechanisms behind women's positions within the academic labour market, in order to elaborate the most appropriate self-tailored gender equality action plans in each GARCIA institution.

1. ANALYSING WOMEN'S ACADEMIC CAREERS IN CROSS-NATIONAL PERSPECTIVE: PRINCIPLES AND PRACTICES

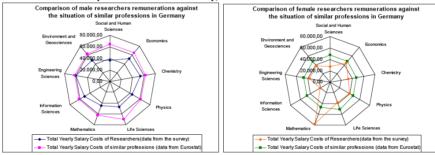
Cross-national comparative research is complex and its methodological foundations are much debated (Oyen, 1990; Pickvance, 1986; Ragin, 1991), including in relation to occupational feminisation (Crompton, 2006; Crompton & Le Feuvre, 2000; Le Feuvre, 2010a). However, from the outset, the GARCIA consortium recognised the need to take the societal and institutional environment into account when analysing the early stages of women's academic careers in different national contexts. This is something of a challenge, given the lack of systematic data on academic career paths in different institutional contexts, particularly the lack of high quality longitudinal data on women's career progression, as compared to that of men (cf. Caprile et al, 2012). Because of the lack of conceptually comparative research projects on this topic (Le Feuvre, 2015b), it is extremely difficult to comprehend and contrast the mechanisms behind the progressive (and variable) evaporation of women throughout successive academic career stages. Thus, although descriptive statistical data on women's academic careers are useful for measuring advances and barriers to gender equality in science (European Commission / SHE Figures, 2013), they often fails to provide the basis for understanding the complex mechanisms at play in different national (and local) contexts. This is notably the case because national averages for women's access to different levels of the academic occupational hierarchy tend to mask what are sometimes quite large intra-national variations, by discipline, type of institution, region, etc.

For example, in a recent publication, Mark Lutter and Martin Schröder have shown that, in Germany, women with a PhD in sociology currently have a 40% **higher** chance of reaching a tenured professorship than their male colleagues, once the number and type of scholarly publications and all other performance factors have been taken into account (Lutter & Schröder, 2014: 6). The authors of this longitudinal study provide no explanations for this rather surprising result, in a country where women's access to grade A and B positions is systematically below the EU-average¹ and where a great deal of research has been conducted on women's elimination from the academic hierarchy (e.g. Beaufays & Kraïs, 2005). It would be tempting to conclude that women's chances of progression up the

¹ In Germany, women represent 15% of grade A positions and 21% of grade B positions, as compared to EU27 averages of 20% and 37% respectively (European Commission / SHE Figures, 2013: 90).

academic hierarchy must be better in the most highly feminised fields of study, but this is not confirmed by existing studies (European Commission / SHE Figures, 2013). Nor would there seem to be a universally egalitarian tradition amongst social scientists, since recent studies of women's academic career progression in sociology in other national contexts confirm that women are significantly less likely than their male counterparts to reach the pinnacle of the occupational hierarchy. Even those women who do progress onto full professorships take much longer to reach grade A positions than similarly qualified men (Backouche et al, 2009; Chenu & Martin, 2015; de Cheveigné, 2009; Delavault et al, 2002). Since this relative female advantage is so unusual, it is perhaps worth considering the relative attractiveness of sociology professorships, in comparison to the alternative employment opportunities open to PhDs in this field and in this particular context. In fact, data from the European Commission/CARSA (2007) study of pay levels in different employment sectors would seem to suggest that the relative financial disadvantage associated with jobs in the higher education (HE) sector is particularly high for men in the social and human sciences in Germany (Figure 1).

Figure 1. Comparison of male and female researchers remunerations against the situation in similar professions in Germany, 2006



Source: European Commission / CARSA, 2007: 194.

Thus, much of the existing literature has blind spots that are particularly detrimental to a clear understanding of the multiple causes of women's position at the top of the academic hierarchy, a necessary condition for initiating the kind of structural change to which the GARCIA project aspires. In line with a certain number of previous comparative research projects (Ollagnier & Solar, 2010; Scott Metcalfe & Padilla Gonzalez, 2013; Siemienska & Zimmer, 2007), the GARCIA project is based on the idea that "women and science" research would benefit from the more systematic inclusion of a cross-national comparative and longitudinal perspectives, particularly on the three following topics:

- The dominant gender norms and female employment and family formation practices in a given national context;
- The organisational characteristics of academic careers in different national contexts, and their potential variation by discipline, type of institution or region;
- 3) The relative attractiveness of academic occupations, as compared to

alternative professions, in different national (and local) contexts.

The following sub-sections attempt to explain the interest of adopting this analytical perspective for understanding the mechanisms that determine the precise patterns of occupational feminisation and family formation patterns in different national settings (Fagnani, 2007; Le Feuvre, 2010a).

1.1. Analysing gender norms in comparative perspective

In existing research, authors often mention gender norms, expectations or stereotypes as a primary factor in explaining the "evaporation" or underachievement of women in the academic field. These norms are presumed to play an important role in almost all dimensions of scientific occupations, including:

- choice of discipline (horizontal segregation);
- 2) (lack of) women's career progression (vertical segregation) and
- 3) time-strain issues (so-called work-life balance) (Caprile et al, 2012).

However, even a cursory glance at the now voluminous "gender and welfare" literature (e.g. Lewis, 1997, 2002) suggests that gender norms are in fact highly variable from one national (local) context to another. Behaviour that may be seen to transgress normative gender practices in one country may be perfectly compatible with the social expectations placed on women in another societal context (as we will see below, women's adoption of continuous, full-time employment patterns is an excellent example of the variability in gender norms across the GARCIA countries). The absence of comparative analysis of the "gender regimes" within which women are making decisions about their future is particularly detrimental to the quality of the research carried out on this topic. As the authors of the EU meta-analysis have noted: "a large bulk of the literature is still mainly concerned with women's choices, barriers and deficits and fails to address the societal and institutional factors that are at play" (Caprile, 2012: 16).

Before we can determine the extent to which the expectations placed on aspiring academics and the criteria used to judge their performance are intrinsically in conformity to or in contradiction with the social requirements placed on men and women, it is vital to explore exactly what those requirements are and, therefore, to admit that **they are not necessarily exactly the same** in all national (and local) contexts.

1.2. Analysing academic labour markets in comparative perspective

In a similar vein, much of the "women and science" literature presumes that the organisational structure and requirements of a (successful) scientific career are identical across time and place. Indeed, the increasing "internationalisation" of academic occupations (in terms of values, if not necessarily in practice) and the widespread adoption of "new public management" principles within research institutions have probably led to a renewed focus on the *commonalities* of academic

career requirements and criteria of excellence (Addis, 2010; Addis & Brouns, 2004; Benschop & Brouns, 2003; van den Brink & Benschop, 2011), to the detriment of attention to factors that are potentially specific to certain national (local) institutional contexts.

Nevertheless, the configurations of academic careers continue to be largely contingent on specific national (or local) contexts. In her comparative study of academics in different Western countries, Christine Musselin has insisted on the fact that: "Salaries, occupational status, recruitment procedures, promotion rules, workload, career paths, etc., tend to vary significantly from one national higher education system to another" (Musselin, 2005: 135). She has identified four aspects of academic labour markets that are particularly sensitive to national variation:

- 1) Selection (recruitment) procedures (e.g. national pre-qualification *versus* direct competition at the institutional level);
- 2) Length and function of the pre-tenure period (e.g. rapid autonomy for young researchers *versus* a prolonged (subordinate) apprentice period);
- 3) Relative importance of internal and external labour markets (e.g. importance and acceptability of "local" (same institution) *versus* "national" or "international" career paths);
- 4) Relative pay and salary determinants (e.g. relative level of remuneration, in comparison to comparable alternative occupations, and proportion of "performance related" pay). (Musselin, 2005: 139).

However, attention to the societal specificities of the academic labour market should not mask the fact that scientific careers do share a number of characteristics that seem to cut across national boundaries.

First, it would appear that transparency and accountability are becoming increasingly important in academic recruitment, tenure and promotion procedures. As a result, research productivity indicators, in the form of publications and/or patents having become the universal benchmark of academic "excellence" in almost all countries, despite regular attempts to diversify the criteria for evaluating professional performance (Addis & Brouns 2004).

Secondly, academic careers can generally be described as "boundary-less" (Briscoe et al, 2006; Hall, 2004) and "vocational", since they are expected to provide intrinsic satisfaction to those who chose to follow their research "calling". Furthermore, work is usually expected to be all-invasive, spilling over from the professional sphere into (all) other aspects of academics' lives, making the distinction between "work" and "leisure" somewhat blurred. Since work in these occupations is supposed to bring an intrinsic sense of pleasure and personal satisfaction, there is no objective reason to limit its' duration, nor to circumscribe it to particular times of the day (or night). With the exception of some teaching, lab experiments and administrative tasks, academic work is generally seen as extremely flexible in terms of location and timing; it can be done just about anywhere and is not constrained to "office hours" or to a particular location. Rather than acting in favour of work-life balance, the flexibility associated with academic careers is often associated with a

long work-hours culture, the presumption of "unlimited availability" of academic staff, combined with requirements to be geographically mobile and to manage tight deadlines (Gill, 2009).

In most European countries, the higher education and research sectors have progressively come to epitomise the idea of "greedy institutions" (Coser, 1974), vying for the "undivided commitment" of their time-pressured staff, at the expense of all other dimensions of their lives. As such, academic careers are usually seen as detrimental to family life and particularly unwelcoming to the mothers (or even parents) of young children. We know that in most countries academics declare longer working hours than many other occupational groups (Barrett & Barrett, 2011) and that this is often seen as a health risk (Tytherleigh *et al*, 2007). However, there is only sparse and anecdotal information on the actual working-time arrangements and time management strategies of academics in specific national contexts, particularly during the early stages of their careers (Fusulier & del Rio Carral, 2013).

This rather pessimistic description of academic occupations is also difficult to reconcile with the fact that male and female researchers in HES institutions are actually more likely to have children than their counterparts in other occupations; something that holds true for all European countries, irrespective of the national gender regime (European Commission/SHE Figures, 2013). As observed in previous cross-national comparative research, the individual consequences of the dominant time use patterns in academic research occupations may vary considerably from one national context to another. For example, the Women in European Universities project (Latour & Le Feuvre, 2006; Le Feuvre, 2009) observed that over half of female full professors in Germany were childless, whereas the vast majority (70%) of their French counterparts had at least two children (as many as male professors in France). Apparently, the possibility to work according to "flexible" work schedules does not have the same consequences for women in different national and institutional contexts. It is therefore important to gather detailed information about the practical organisational characteristics of academic occupations and career structures in different countries. We can't presume that the academic professional ethos is identical in all national (or local) contexts, nor can we presume that the research organisational culture is significantly different from that observed in equivalent and alternative professions for PhD graduates (Le Feuvre & Lapeyre, 2013).

1.3. Analysing academic career structures in comparative perspective

Probably because research on gendered academic careers is usually carried out by women who have chosen to remain in the HE sector, or by those who aspire to an academic career, it appears to be infused with the idea that academic labour market necessarily offers the best possible career opportunities to female PhD graduates. In reality, a limited number of studies have shown that the relative position of academic occupations in the socio-professional hierarchy is highly variable from one

national context to the next, as are the monetary and other rewards associated with working in public or private sector research institutions (European Commission/CARSA, 2007; Studer, 2012).

In the **Swiss** case, Matthias Studer (2012) has shown that the proportion of women who decide to embark on a PhD after their Masters' Degree varies considerably according to the alternative employment opportunities available in the local labour market for graduates from particular fields of study. The more limited the non-academic employment possibilities, the higher the proportion of women amongst PhD students. At this early stage in their life-course, women thus tend to protect themselves from the risk of discrimination in the local labour market by staying in the (relatively) "safe haven" of the academy. Their excellent educational results enable them to compete successfully with their male counterparts for paid PhD positions and grants. Studer found no significant gender differences in the success rate or duration of the doctoral studies (once disciplinary field had been for controlled for). However, female PhD graduates were significantly less likely than their male counterparts to have obtained a professorship within the 10 years following their doctorate, particularly in those disciplinary fields where they are in a majority. According to Studer, male PhD holders tend to adopt an "up or out" attitude towards the academic career; they only remain in the academy if they are ensured of obtaining a tenured position within a "reasonable" length of time. Female PhDs, on the other hand, are more willing to accept a succession of fixed-term research and/or teaching contracts, often on a part-time basis and with no immediate prospect of tenure. This is particularly the case in the most feminised fields of study, where alternative (non-academic) employment opportunities are least numerous and less intrinsically satisfying than research. When they finally become disenchanted (at best) or frustrated with being overlooked for permanent academic positions (usually after having founded a family), these highly-qualified female researchers find it even more difficult to find a nonacademic job that is compatible with their family obligations and with their past work experience.

So, just as there is not a universal set of gender norms that influence women's access to scientific jobs and their ability to progress (or not) up the academic hierarchy, so there is not a universal academic career structure that women (and men) may decide to embark upon. Equally there is not a standard attractiveness of the academy in relation to other employment opportunities for PhD graduates. Each of these dimensions of gender regimes and academic labour markets need to be carefully contextualised before descriptive data on women's access to scientific careers can be analysed and interpreted correctly.

1.4. Analysing the multiple dimensions of women's academic careers

The fact that the characteristics of societal gender regimes and of national (local) academic labour markets are often overlooked in much of the gender and science research literature has analytical consequences, which are compounded by the relative homogeneity of women's access to the most prestigious jobs in the academic hierarchy across national boundaries. Because women represent about 20% of Grade A professorships in most Western societies (see below), there is a marked tendency to presume that this under-representation must be the result of *identical social processes* across national contexts.

However, much existing research on similarly *universal* social phenomena (such as the "second demographic transition") suggests that apparently similar social phenomena don't necessarily result from identical mechanisms in all national contexts (cf. Douglass, 2005). Neither do these apparently common phenomena command identical levels of political and policy attention in all countries. Thus, women's under-representation in full professorships may be a transnational reality, but that doesn't necessarily mean that it is caused by the same factors, that it is problematized in the same way in all national contexts, or that the "solutions" proposed share the same diagnosis of what the problem really is (Bacchi, 1999, 2009; Le Feuvre, 2010b, 2013).

In turn, it is likely that the visibility and legitimacy of the "women and science problem" (Garforth & Kerr, 2009; Le Feuvre, 2010b) will affect gender awareness within academic institutions. Increasing knowledge about gendered practices will probably shape the opportunities women have to challenge different forms of marginalisation or discrimination in the academy.

Although we focus here on the employment and care regimes that shape the national (and local) gender configurations in the seven GARCIA partner countries, we are not suggesting that the mechanisms behind women's academic career patterns are **determined** by societal welfare regimes. On the contrary, research to date shows that the specific characteristics of national academic labour markets interact in quite unpredictable ways with the societal gender regimes to produce a particular matrix of opportunity and constraint for highly qualified women (and, indeed, men). This can be illustrated by the comparison of the contrasting patterns of feminisation of Danish and Finnish academic careers since the beginning of the 2000s. Figure 2 shows that, despite a similar (Nordic) welfare regime and almost identical patterns of women's labour market participation in Denmark and Finland, academic careers are not gendered in the same way these two countries.

But, although women's position in the academic hierarchy can't be **explained** by the national level gender regime, it is nevertheless important to understand the precise kind of norms and expectations that women (and men) are facing as they envisage 1) continuing their studies to PhD level; 2) remaining in the scientific field in order to embark on an academic career path; 3) pursuing their academic career to the highest possible professional status.

Finland Denmark 100 100 90 90 80 80 70 70 60 60 50 50 40 40 30 30 20 20 10 10 0 0 PhD holders Grade C Grade B PhD holders Grade C Grade B Grade A Women - 1999 --- Men - 1999 Women - 1999 --- Men - 1999 Women - 2007 ---- Men - 2007 Women - 2007 ---- Men - 2007

Figure 2. The gender composition of academic careers in Denmark and Finland, 1999-2007

Source: She Figures (EC, 2004 and 2009a).

Definition of grades: A: The single highest grade/post at which research is normally conducted. B: Researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders. C: The first grade/post into which a newly qualified PhD graduate would normally be recruited.

1.4.1. Some working hypotheses for the comparative analysis of women's academic careers

Given the likely influence of the societal / local context on institutional arrangements and on individual aspirations, beliefs and practices, we hypothesise that:

- The structure of opportunity and constraint available to different categories of women (single / married / divorced, with or without children, with or without other care responsibilities) differs significantly among the countries involved in the GARCIA project, but also within each national context, by region, education, social origin, etc.;
- 2) These societal / regional level gender norms are deeply embedded in the career structures of academic institutions, which tend to reflect the normative employment patterns (and family disinvestment) usually associated with white, middle-class men in each national setting;
- 3) However, since societal gender regimes can be more or less strongly differentiated and hierarchical in different national (and local) contexts, one can presume that women's ability to conform to the inherently "masculine" expectations associated with academic excellence will vary considerably from one country to another, as will the symbolic rewards and penalties associated with different forms of gender transgression;
- 4) The structural changes currently effecting academic labour markets in most national settings (reduced structural funding, standardisation of performance indicators, increased competition for funding, increasing student numbers,

promotion of international mobility, etc.) are likely to destabilise the dominant professional ethos associated with these previously "male bastions" and to lead to increasing levels of internal segregation, by gender, but also by generation, type of contract and nationality, etc..

1.4.2. The gender equality index for GARCIA countries

Before summarising the most significant results from the National reports, it is perhaps useful to refer to existing measures of gender regimes associated with each GARCIA country. As indicated in Figure 3 (see also Appendix 1 for a more detailed presentation), the European Institute for Gender Equality (EIGE) has recently developed a multidimensional indicator of gender equality that enables comparison between countries and an evaluation of evolutions over time, according to different dimensions of gender equality.²

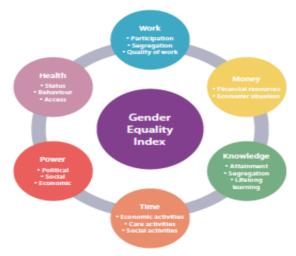


Figure 3. The composition of the European Gender Equality Index, 2015

Source: EIGE 2015: 12.

According to these indicators, GARCIA countries cover quite a wide spectrum of gender equality cases. Clearly, some dimensions of the gender equality measures are more significant than others (see Table 1). Thus, all GARCIA countries score similarly (and well) on health indicators, but they are characterised by large discrepancies in relation to knowledge, time and power, with intermediate levels of dispersion in the domains of work and money.

² The closer the Index is to 100, the higher the level of gender equality in a country. Unfortunately, this Index is only available for EU-Member states. In the absence of equivalent data for Iceland and Switzerland, we have used the World Economic Forum Global Gender Gap Index (2014), which covers similar dimensions, although in less detail than the EIGE Index.

Table 1. Gender Equality Index Scores and Global Gender Gap Index Rankings, selected countries, 2012

EU Member States	Gender Equality Index	Work	Money	Know- Ledge	Time	Power	Health	Global Gender Gap Index (Rank)
Austria	50.2	66.5	77.6	44.5	38.6	27.1	92.7	73 (36th)
Belgium	58.2	59.5	79.6	51.0	44.1	49.5	93.6	78.0 (10th)
Italy	41.1	43.8	68.0	32.5	32.4	21.8	89.5	70.0 (69th)
Netherlands	68.5	69.0	83.6	64.6	71.2	51.3	93.6	77.0 (14th)
Slovenia	57.3	63.5	71.3	49.4	46.6	47.2	90.1	74 (23rd)
Iceland	-							86.0 (1st)
Switzerland	-							78 (11th)

Source: EIGE 2015: 78, and World Economic Forum (2014).

However, as we have already stressed, this overall ranking of countries is not necessarily reflected in each of the policy domains analysed by the GARCIA project, nor does it directly reflect women's position in the academic career hierarchy. Thus, for example, it is interesting to note that women's access to grade A academic positions is equal to or higher than the EU27 average in four of the GARCIA partner countries (Table 2). Three of these countries register relatively high scores on the EIGE/World Economic Forum indexes (Iceland, Switzerland and Slovenia), whereas the fourth country (Italy) has – by far – the lowest overall gender equality index of all the cases studied here (see Table 1). A number of tentative interpretations can be advances here.

In the **Italian** case, it appears that relying on the national averages of these gender indicators is particularly misleading, since women's labour market participation and family formation patterns are extremely different between different regions (Bozzon *et al*, 2015: 22). Whereas women in the southern regions of Italy tend to adapt their behaviour to the expectations of the "male breadwinner / female carer" gender regime, notably by leaving the labour market when they become mothers, this is far less often the case in the Centre-North of the country, precisely where the GARCIA partner institution is located. It would appear that the very uneven economic development of the country throughout the 20th Century has left a legacy of quite distinct regional "gender regimes", despite a common set of welfare policies defined at the national level.

Table 2. Number and proportion of female academic staff, by grade, 2010

	Grade A	Grade B	Grade C	Grade D	Total
Austria	381	884	3 115	5 426	38%
Austria	17%	22%	44%	42%	38%
Belgium	272	741	1 918		38%
Beigium	12%	27%	34%	-	38%
Iceland	72	87	130		36%
iceianu	24%	36%	49%	-	30%
ltal.	3 182	5 814	11 786	9 087	39%
Italy	20%	34%	45%	51%	39%
Netherlands	413	512	1 821	7 622	37%
Netherlands	13%	21%	34%	45%	37%
Slovenia	292	353	1 281	309	38%
Siovenia	20%	31%	46%	51%	38%
Switzerland	1 974	814	9 914	1 585	36%
Switzerland	26%	25%	39%	46%	30%
EU27	20%	37%	44%	46%	40%

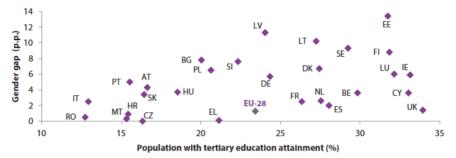
Source: European Commission / SHE Figures 2013: 90 and 107.

With this absence of statistical correlation in mind, we will now present a certain number of similarities and differences between the GARCIA countries as far as the gender, care and employment regimes are concerned. The aim here is to illustrate the considerable inter- and intra-country variations in the policies and practices that influence male and female employment and family-formation patterns, and that these societal level "gender configurations" are also in constant evolution, although not necessarily towards a more egalitarian sexual division of – paid and unpaid – labour.

2. ACADEMIC LABOUR MARKETS IN COMPARATIVE PERSPECTIVE

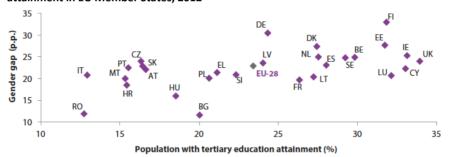
As indicated in all the National policy reports, women's equal access to the highest levels of education is now ensured in all GARCIA countries. However, the National policy reports show the persistence of varying levels of horizontal segregation in different national contexts. Figures 4 and 5 show the dispersion of EU-Member States in relation to tertiary qualifications. They demonstrate that, as members of the most highly qualified groups in society, women PhDs are confronted with quite different societal environments. On the one hand, the proportion of tertiary-education people in the population varies considerably (from 13% in Italy, to 30% in Belgium, for example). On the other hand, the gender-composition of this most educated group varies significantly, although it is fairly similar in most GARCIA countries (including Iceland and Switzerland, not shown here). Of course, as indicated below, women's share of tertiary qualifications is much higher amongst the younger generations.

Figure 4. Gender gaps in population (15-74) having attained 1st and 2nd stage of tertiary education (levels 5 and 6 ISCED) and population with tertiary education attainment in EU Member States, 2012



Source: EIGE 2015: 43

Figure 5. Gender gaps in sectorial segregation and population with tertiary education attainment in EU Member States, 2012



Source: EIGE 2015: 44

2.1. Comparing women's access to advanced research degrees

Women currently represent 46% of all PhD graduates in the EU-27 (European Commission/SHE Figures, 2013: 7). Over the period 2002–2010, the average number of female PhD graduates increased at a rate of 3.7 % per year, compared to 1.6 % for male PhD graduates (European Commission/SHE Figures, 2013: 7). As indicated in Table 3, women now represent between 40% and 60% of all advanced research degree graduates in the GARCIA countries. There are also the only two GARCIA countries where women aged 25-49 years represent less than 50% of all tertiary-level qualifications, and this figure is closer to 60% in Iceland, Italy, the Netherlands and Slovenia (Le Feuvre, 2015a: 291). The lowest level of feminisation of advanced research degrees is shared by Austria and Switzerland, both countries where vocational secondary education courses attract a large share of young people and

where older generations of women tended to be significantly less qualified than their male counterparts. Although this process of feminisation varies across fields of study in all countries, it is nevertheless progressing, even in those fields where women have been historically under-represented (science, technology and engineering).

Table 3. Women's share of advanced research degrees, by field of study, 2012

				Field o	f Study	-	-	
Country	Education	Humanities & Arts	Business & Law*	Science	Engineering	Agriculture	Health & Welfare	All
AT	72.8	58.3	50.7	32.5	25.1	57.9	55.9	41.8
BE	70.9	48.8	50.8	38.1	30.2	51.5	59.6	43.8
IS	73.0	60.8	64.4	45.7	53.3	50.0	83.8	60.0
IT	73.5	58.6	54.4	50.8	34.6	53.6	64.7	51.3
NL	72.2	54.7	47.6	22.2	17.6	53.7	72.4	44.9
SI	79.8	66.8	56.6	49.3	26.6	60.9	71.2	50.4
СН	63.3	54.0	46.4	36.5	25.5	74.8	55.0	41.8

Source: UNECE Statistical Database, compiled from national and international (Eurostat and UNESCO Institute for Statistics) official sources.

Note: For all the counties, the figures refer to level 6 qualifications, except for the Netherlands, where they refer to level 5B.

2.2. Comparing horizontal gender segregation in fields of education

Since women now make up half of all advances research graduates, it has become easier to refute the idea that scientific culture is intrinsically masculine. However, the persistence of quite marked horizontal segregation in the choice of field of study in some GARCIA countries would tend to suggest that gender conformity is judged less on the basis of level of qualifications than on the field of studies.

The **Netherlands** stands out as a particular case here, because women's share of advanced science and engineering degrees is particularly low in this country. This is all the more surprising because the Dutch labour market doesn't have a particularly high degree of gender segregation overall (see the Gender Equality Index). The low attractiveness of science courses for women persists in this country despite the adoption of a series of information campaigns by the Dutch Ministry for Education (Benshop *et al*, 2015: 89). These campaigns were first adopted as early as 1987, and were

^{*} Including the Social sciences.

repeated in 1990 and in 2008. As we will see below, the aversion of Dutch women for information technology and engineering degrees probably reflects the fact that the employment opportunities associated with these educational fields are perceived as being incompatible with the dominantly part-time labour market participation patterns that prevail amongst mothers in this national context.

In comparison to the Dutch case, the proportion of women amongst Engineering and Technology graduates has increased quite spectacularly in Slovenia over past 12 years. This increase is also reflected in the HE sector, where women now represent a third of researchers, as against just 17% in 2002 (European Commission/SHE Figures, 2013: 66). This increase has taken place in the absence of any concerted equal opportunity programmes within Slovenian higher education institutions (Cernic-Istenic *et al*, 2015).

2.3. Comparing the characteristics of academic labour markets

As a result of their increasing educational achievements, women have also significantly improved their rate of employment in tertiary educational institutions, where they currently represent about 40% of teaching and research staff in Europe. In GARCIA countries, between 34% and 44% of all researchers in the HE sector are women. As in many other cases, this rise in women's presence was achieved during a period of demographic expansion of the (mainly public sector) academic labour market. Women researchers have thus not replaced or displaced their male counterparts, since the absolute number of male researchers has also been increasing, albeit at a slower rate than for women (see Table 4). It is therefore no longer access to the higher education and research sector that represents the major barrier for women in Europe today; it is more the ability to reach the pinnacle of the academic profession that presents a greater challenge for women than for men in most GARCIA countries, as elsewhere in the EU:

"Women's academic career remains markedly characterised by strong vertical segregation. In 2010, the proportion of female students (55%) and graduates (59%) exceeded that of male students, but men outnumbered women among PhD students and graduates (the proportion of female students stood at 49% and that of PhD graduates at 46%). Furthermore, women represented only 44% of grade C academic staff, 37% of grade B academic staff and 20% of grade A academic staff." (European Commission/SHE Figures, 2013: 8).

Table 4. Number of male and female researchers in the HE sector, by sex, 2002-2009

											%
	20	2005	2006	6	2007	07	2008	38	200)9	women
											in 2009
Country	Woman	Men									
AT	-	-	8 190	15 419	9 455	16502	-	-	10 965	18 074	37.7%
BE	9 437	16622	9 998	16831	10 580	17 422	11 262	18 083	11 835	18 5 19	38.9%
IS	543	706	606	775	559	702	584	734	658	846	43.8%
П	24 311	45 876	25 721	46 683	25 482	47 257	27 507	47 433	29 170	47 915	37.8%
NL	6 917	13 837	7 124	13 728	7 292	13 731	7 765	13 912	8 321	14 236	36.9%
SI	1 291	2 273	1 374	2 235	1 348	2 275	1 619	2 545	1 723	2 508	40.7%
СН	-	-	9 455	20 185	1	-	11 408	22 195	-	1	33.9%

Source: European Commission / SHE Figures, 2013: 45. Note: The percentage of women calculated on 2008 figures for Switzerland.

2.3.1. Contrasting demographic evolutions of academic labour markets

It is worth noting the extremely divergent demographics of the HES in GARCIA countries. Both Switzerland and Iceland have an unusually high proportion of HES researchers amongst their workforce, whilst the opposite is true of Italy and the Netherlands.

The absolute number of researchers reflects to a certain extent the age distribution of the national populations and the proportion of young people in tertiary education, as a share of all under-25 year olds.

But the very different (relative) size of the academic labour market also suggests that the working conditions and career opportunities of HE teaching and research staff may also vary considerably according to their national environment.

Table 5. Percentage of male and female academic staff in grade A positions and proportion of female heads of HE sector institutions, 2010

	% of male academic	% of female academic	% of female heads of
	staff in grade A positions	staff in grade A positions	HE institutions
Austria	11.0	4.0	16.2
Belgium	15.0	4.0	12.2
Iceland	43.0	25.0	20.0
Italy	27.0	11.0	23.4
Netherlands	16.0	4.0	13.6
Slovenia	31.0	13.0	-
Switzerland	22.0	14.0	15.8
EU27	17.0	7.0	15.5

Source: European Commission / SHE Figures 2013: 92-115.

Even within a very international labour market for academic staff, the total number of research jobs available to PhD holders in their national labour market will obviously have an impact on the degree of competition likely to be experienced for each existing position. However, potentially contradictory forces may be at work here. On the one hand, women's above average access to grade A in Iceland and Switzerland may well reflect the *relative* abundance of HE research positions in these countries, as compared to other national contexts (see Table 5). On the other hand, increased competition and difficult working conditions may make the Italian academic labour market less attractive than other professions, producing a limited form of "male defection" from the sector, which in turn leads to an equivalent percentage of women in grade A positions, **but for rather different reasons** than in the previous cases discussed. When interpreting descriptive data about women's

relative access to different positions in the academic occupational hierarchy, it is important to consider the huge diversity of working conditions that academic face in different national contexts.

Although we would not go so far as to suggest that increasing rates of feminisation are necessarily a reflection of worsening of employment conditions in the academic research sector (Bourdieu, 1998), it is nevertheless important to remember that women can sometimes represent what the Polish sociologist Renata Siemienska (2001) has called "winners amongst losers". As shown in the following sectors, the structural characteristics of academic labour markets are actually quite diverse in the European context. The proportion of grade A positions in relation to more subordinate research jobs varies significantly between GARCIA countries (see Table 5), as do the relative rates of remuneration for man and women at different stages of an academic career.

2.3.2. Contrasting academic career structures and opportunities

Another important factor to consider when analysing women's access to grade A positions is the relative importance of tenured full-professorships as a share of the total academic labour market. As indicated in Table 5, this share also varies considerably between countries. Thus, in the EU27 as a whole, 17% of male academics hold a full professorship, as compared to only 7% of their female counterparts. But the percentage of full professorships in relation to the whole academic sector ranges from almost half (43%) of all male researchers in Iceland (and a quarter of all females) to just 11% and 4%, respectively, in Austria.

National academic labour markets are thus potentially "bottom" or "top" heavy and this also has considerable consequences for the relative chances of men and women to reach the top of the occupational hierarchy. Quite clearly, in Austria, Belgium and the Netherlands, the route to the top is extremely selective, even for men. It is more than twice as difficult to navigate for their female counterparts. However, in Iceland and Slovenia, and to a lesser extent in Italy and Switzerland, the path to the top resembles less conquering Everest and more of a steady progression. The much flatter career structure opens up the opportunity for a larger proportion of all academic staff to – eventually – reach the top. However, even in these less fiercely competitive contexts, women are less than half as likely to achieve the ascension than their male colleagues. They are nevertheless significantly more likely (at least three times more, in fact) to obtain a full professorship than their Austrian, Belgium or Dutch counterparts.

Of course, the relative abundance of full professorships in a given national context is subject to considerable change over time and place. The Figure in Appendix 4 illustrates quite clearly the inter-country variations as to the proportion of tenured jobs within the academic sector in different national contexts. This proportion probably also varies by disciplinary field, although we have not be able to locate any comparative data on this point in the literature.

In Italy, the political decision to cut the HE budget by only replacing 50% of the tenured academic staff who have reached retirement age is having considerable effects on the internal career academic structure of universities and on the employment opportunities for young researchers. Thus, between 2008 and 2013, the number of teaching and research staff in Italian universities has increased by 5.2%, while the number of permanent academic positions (full, associate and assistant professors) has fallen dramatically, by 18.5%. This drop is almost exclusively due to the nonreplacement of retirees and is particularly visible at the very top of the occupational hierarchy (-26.6% for full professors, -15.4% for associate professors, -13.4% for assistant professors). In parallel, the number of nonpermanent research positions has increased by a staggering 71.2%. In 2013, non-permanent positions account for 37% of the teaching and research staff in Italian universities; a figure that rises to 50% if PhD students are included in the calculations. More than 60% of these fixed-term positions are research fellows, who aren't covered by Italian labour laws and employment rights (they have no access to paid maternity leave or to unemployment benefit at the end of their contract, for example). Only 10% of these fixedterms contracts correspond to research positions with almost standard employment conditions (A and B type fixed-term researchers). Furthermore, women are slightly under-represented amongst the most stable of these precarious academic positions (43.3% of fixed-term researchers), whereas they represent half of the fixed-term research fellows and collaborators (Bozzon et al, 2015: 36-37).

Finally, it is worth noting that women access the top leadership positions in academic institutions in about the same proportions as they access grade A positions in each of the national contexts (or just slightly below that rate, as in Iceland, Italy and Switzerland). Their under-representation as heads of HE institutions (see Table 5) is thus a direct effect of their exclusion from the top of the academic hierarchy, which provides the pool of potential candidates for such leadership positions, rather than the consequence of a particularly female aversion to power and institutional responsibility.

2.3.3. Contrasting academic pay levels

According to Maria Caprile and her colleagues, in the EU, women represent 39% of researchers in the government (public administration) sector, 37% in the HES and only 19% in the business sector (Caprile *et al*, 2012: 125). This horizontal segregation is important to consider because, in most countries, the relative levels of pay for research occupations vary considerably according to the sector of activity, although the hierarchy between employment sectors is not the same in all GARCIA countries (see Table 6). Thus, researchers in government (public administration) research jobs earn more than their colleagues in the academic (HE) sector in Belgium, Italy, and Switzerland, but they are paid less (sometimes quite a lot less)

than academic researchers in Austria, Iceland, the Netherlands and Slovenia. Belgium is the only country where research salaries in the private (business) sector are higher than those in the government and HE sectors.

As noted earlier, the gender pay gap is generally higher in research occupations than the national average. Amongst GARCIA countries, Slovenia is the only exception to this rule. Such large inequalities in pay levels for men and women are probably explained by a number of factors, including the gender distribution of researchers between the three employment sectors, the higher proportion of women working part-time, but also their age distribution within each sector.

Table 6. Average weighted total yearly salary of researchers in selected countries, by sector of activity and sex, 2007 (all currencies expressed in PPS – purchasing power standard)

	Researc	n employmer	nt sector	Avera	ge gender pa	y gap
Country	Business Sector	Gov/ Public Admin. Sector	HE Sector	Female	Male	Gender Pay Gap (%)
AT	65 805	49 182	62 069	45 689	65 647	30.40
BE	68 228	63 306	46 507	42 161	62 326	32.35
IS	-	32 512	34 622	39 487	55 051	28.27
IT	36 575	37 559	34 204	25 652	38 440	33.27
NL	64 080	46 206	65 923	43 317	64 691	33.04
SI	34 335	34 420	41 501	34 095	40 249	15.29
CH	51 548	66 396	62 337	48 462	63 334	23.48

European Commission/CARSA, 2007: 48-49.

Table 7. Average weighted total yearly salary of researchers, selected countries, by sex and level of experience, 2007 (all currencies expressed in PPS – purchasing power standard)

star	idard)									
Country	0-4	years	5-7 y	ears	8-10 y	/ears	11-15	years	>16 \	years
Cou	Female	Male								
ΑT	34 473	37 244	41 921	50 446	49 369	63 648	56 817	76 850	64 266	90 052
BE	27 767	26 002	35 079	40 933	42 392	55 064	49 705	69 195	57 018	83 326
IS	45 664	44 713	50 070	50 073	52 273	55 432	54 475	60 792	58 881	66 152
IT	12 244	12 760	19 777	23 488	27 310	34 216	34 844	44 944	42 377	55 672
NL	22 518	31 921	35 655	47 095	48 792	62 269	61 929	77 443	75 066	92 617
SI	16 424	17 976	22 502	22 372	28 581	27 844	34 659	34 654	40 737	43 130
СН	39 599	40 062	55 711	61 075	71 823	81 288	87 935	101501	104047	121756

European Commission/CARSA, 2007: 48-49.

Table 7 shows quite clearly that the difference in the levels of remuneration of male and female researchers increase quite spectacularly according to the number of years of experience. With the exception of the Netherlands, where the gender gap is quite striking even amongst early career stage researchers, and Slovenia, where the gender gap is relatively modest across the whole of the career duration, the relative advantage of being a man increases progressively over time in most of the GARCIA countries. Appendix 5 also enables a comparison of relative pay rates for academics with permanent or fixed-term contacts.

From a comparative perspective, this means that, from a purely financial point of view, the relative attractiveness of academic jobs is not necessarily the same at different points in the career progression. For example, relative to other national contexts, young researchers working in Iceland (before the 2008 crisis) were considerably better paid than their counterparts in most other European countries. Icelandic research salaries during the first four years following a PhD ranked 4th in the European Commission 2006 study on research pay. However, this relatively favourable financial rewards associated with scientific occupations did not extend throughout the whole duration of the academic career. After 15 years professional experience, the pays levels of Icelandic academics were only ranked in 21st position, i.e. comparatively lower than in all the other GARCIA countries, with the exception of Slovenia (European Commission/CARSA, 2007: 52). Interestingly, at the time of this study, four GARCIA countries (Austria, Belgium, the Netherlands and Switzerland) were ranked amongst the top 5 nations for senior research salaries (with 15 or more years work experience), but only Austria and Iceland were amongst the top five for early career stage remuneration.

Although financial gain is rarely cited as a major motivation for pursuing an academic career (Caprile *et al*, 2012), it is nevertheless important to bare in mind the diversity of financial rewards offered to academics in different national contexts, since this is undoubtedly a factor that influences the intensity of competition for junior and senior positions in the academy in different national (and local) contexts.

The Figures presented in Appendices 5 and 6 provide more detailed information about the relative pay of permanent and non-permanent academics and, perhaps more importantly, on the relative pay levels for men and women in the academic sector, in comparison to the alterative employment opportunities for PhD graduates in other occupations. It is interesting to note that the relative financial rewards (or penalties) associated with academic jobs are not always identical for men and women in the same national context.

2.4. Comparing women's access to research funding

One of the explanations for women's more limited career achievements that is often mentioned in the literature is their lower rate of access to competitive research funding. Given the general trend towards greater transparency and accountability in academic assessment procedures (Caprile *et al*, 2012), the ability

to secure competitive research funds plays an important role in recruitment and career progression in most national contexts. In some cases, the mere fact of obtaining external funding is taken as an indicator of academic "excellence" and reputation.

The gender gap in research funding certainly exists in the European context, but it is far from a universal phenomenon and the masculine advantage is generally fairly small. Out of the 22 countries for which data on this topic are available, 17 reported higher success rates for men in obtaining research funding, whereas five countries (including Slovenia and Iceland) reported higher success rates for women. Between 2002 and 2010, on average in the EU-27, the gender gap in success rates seems to have closed. However, many individual countries deviated from this overall pattern and gaps became in no less than three GARCIA counties: Austria, the Netherlands and Switzerland. Only Belgium shows almost identical rates of success for male and female applicants (European Commission/SHE Figures, 2013: 8).

Table 8. Number of applicants and beneficiaries of research funding, selected countries, 2010

	Applicants		Benefic	ciaries	Gender Success Rate Differential*	
	Women	Men	Women	Men	2002	2010
AT	1 701	7 089	841	4 250	5.5	10.5
BE	1 148	1 285	285	345	4.5	0.6
IS	379	732	169	288	-0.6	-5.3
IT	929	2 967	107	436	4.9	3.2
NL	898	3 160	402	1310	-3.3	6.9
SI	789	1 781	479	965	-1.8	-6.5
СН	1 133	2 944	550	1 660	6.7	7.8
EU27					12.3	2.5

Source: S European Commission / SHE Figures 2013: 126.

*Gender success rate differential = Male success rate minus female success rate.

Netherlands: Figures for 2002. Belgium: Flemish community only.

Interestingly, there is no clear relationship between gender segregation across fields of science and gender differences in the success rate in obtaining research funding (European Commission / SHE Figures, 2013: 120). Women do not necessarily have a higher chance of success in fields where they are more numerous, but neither is their minority status always a guarantee of receiving funds.

Furthermore, qualitative research suggests that relative success rates in securing research funding only reveal part of the gender bias in academic professions. There is piecemeal evidence to suggest that women are not only slightly less likely to

success in their funding applications, they are also much less likely to tender funding applications in the first place. Validating this finding cross-nationally is extremely complicated, notably because the pool of potential applicants is rarely circumscribed clearly or on a permanent basis. In addition, almost all of the studies on funding success rates focus exclusively on the main scientific funding body in a particular national context, to the detriment of the numerous programmes, foundations and charitable organisations that may be funding research through a variety of measures. Much more data collection and analysis is therefore needed before we can conclude that women are systematically disadvantaged by the existing research funding procedures in different national contexts, or indeed in Europe.

In the meantime, we can presume that the career progression of male and female PhD holders in the academic labour market is at least in part shaped by the wider norms and expectations concerning the sexual division of paid and unpaid labour in the different national contexts. In the following section, we thus move on the compare the conditions under which men and women invest in paid employment throughout their adult lives in GARCIA countries.

3. EMPLOYMENT, CARE AND GENDER REGIMES IN COMPARATIVE PERSPECTIVE

Under a stream of recent policy initiatives in favour of increasing the employment of "under-represented" groups in the labour market (European Commission, 2010), there are signs of a convergence of male and female economic activity patterns within European countries, although women's access to the labour market remains more sensitive to their personal and family circumstances than is the case for men. However, the degree of this "family effect" varies significantly between national contexts, and over time. Likewise, the overall quality of the jobs occupied by men and women is considerably different according to national (and local) contexts.

As indicated in Appendix 2, the EIGE has complied a varied set of indicators in order to compare the degree of gender (in)equality in the employment domain in different national contexts. These indicators cover two dimensions of equality: 1) Participation (full-time employment rate and the duration of working life, expressed in number of years in employment over the life-course) and 2) Labour market segregation and quality of work a) Sectorial segregation, expressed as the % working in Education, Health and Social Work activities; b) the ability to take an hour or two off during working hours to take care of personal or family matters and c) working to tight deadlines (EIGE, 2015).

3.1. The gender equality index in the domain of work

The revised version of the EIGE Gender Equality Index is interesting, because it enables different aspects of women's labour market participation patterns to be

taken into account (Table 9), focusing not only on quantitative labour market participation rates, but also on the conditions under which women are employed outside the home.

Table 9. Gender Equality Index Scores in the domain of work, selected countries, 2012

EU Member States	Gender Equality	Domain of work	Participation	Segregation and Quality of	Global Gender Gap Index (Rank)
	Index			Work	73
AU	50.2	66.5	77.0	58.0	(36th)
BE	58.2	58.5	66.9	52.9	78
	30.2	30.3	00.5	32.3	(10th)
IT	41.1	53.8	57.1	50.6	70 (69th)
					77
NL	68.5	69.0	75.6	62.9	(14th)
SI	57.3	63.6	77.4	52.2	74
31	37.3	03.0	77	32.2	(23rd)
Outside EU					
IS	-	_	95.0	74.0	86
.5			33.0	7 7.0	(1st)
СН	_	_	87.0	67.0	78
			57.0	37.0	(11th)

Source: EIGE, 2015: 78; World Economic Forum, 2014.

3.2. Comparing women's employment rates

Even when we consider gender equality in employment solely under a quantitative participation rate angle, a number of contrasting results appear. These concern the factors that influence women's likelihood of entering the labour market at particular points in their life-course. Of particular interest to us here are the roles of marital status, education levels and motherhood.

3.2.1. The limited influence of marital status

First, being married (or in a legal partnership) has only a marginal influence on women's employment rate in most of the GARCIA countries (Table 10), with the notable exception of Italy (almost -10%). In Iceland and Slovenia, married and divorced women even have higher employment rates than their single / never married counterparts (an age effect is the most likely explanation here).

However, women's employment rates remain sensitive to education levels and to the presence of children in the household.

Table 10. Employment rate of women aged 25-49 years, by marital status, selected countries, 2011

Country	Single / Never Married	Married	Divorced	Widowed
Austria	84.8	78.5	83.1	66.7
Belgium	78.9	74.5	72.8	47.4
Iceland	74.7	82.3	77.4	-
Italy	65.9	54.6	74.6	67.6
Netherlands	84.6	79.0	74.1	66.2
Slovenia	79.4	85.9	83.9	83.3
Switzerland	89.6	73.7	86.5	77.4

Source: UNECE Statistical Database, compiled from national and international (Eurostat) official sources.

3.2.2. The significant influence of education

In comparison to the limited influence of family circumstances, women's activity rates depend to a large extent on their level of education. In all national contexts, the employment rate of the least well-qualified women (ISCED 0-2 levels) is systematically lower than those of their better-qualified compatriots (Table 11). However, the "education effect" is not as important everywhere. There is a 40% difference between the labour market participation rates of the least and the most qualified women in Belgium, whereas the gap is only 15% in Switzerland. Part of this difference can be explained by the fact that the patterns of women's labour market participation are not strictly comparable in different countries. In Switzerland, women with relatively low levels of qualification have the highest employment rates out of all GARCIA countries. This exception can be explained by the fact that they are very likely to be working on a (short) part-time basis, as in the Netherlands.

Table 11. Employment rate of women aged 25-49 years, by highest level of education attained (ISCED), selected countries, 2013

		,		
Country	All ISCED	ISCED 0-2	ISCED 3-4	ISCED 5-8
Country	Levels	(primary)	(secondary)	(tertiary)
Austria	81.7	63.5	84.4	87.2
Belgium	75.3	47.5	74.5	87.4
Iceland	80.0	65.5	81.1	86.4
Italy	57.9	41.1	62.4	73.8
Netherlands	79.3	60.2	78.5	90.0
Slovenia	79.9	54.1	77.9	87.9
Switzerland	80.6	69.2	80.3	85.0

Source: Eurostat

3.2.3. The highly variable influence of motherhood and family configurations

Finally, we can focus on the highly variable influence that the presence of children has on women's employment rates in different national contexts. It is not easy to represent these data graphically, because of the multiple dimensions to be considered. Here, we have chosen two ways of presenting the available data. In Table 12, we have taken the example of Switzerland to illustrate the adjustments that occur as couples move through different life-stages. Contrary to the Slovenian case mentioned earlier, we can note that the dual career model of gender relations is never massively adopted in the Swiss context: even when there are no children at home, only half of couples aged 25-49 years both work full-time. This figure falls dramatically as soon as children appear on the scene. Until they reach school age, only 11% of Swiss mothers maintain a full-time commitment to the labour market, whereas as approximately 44% shift to part-time work and almost 30% leave the labour market completely. As the last child grows older, only a small percentage of these stay-at-home mums return to work, usually on a part-time basis. These country-specific "gender arrangements" (Pfau-Effinger, 1994, 2004) are strongly institutionalised, with school hours, childcare provision (and cost), standard (male) working hours and transport systems, etc., being largely premised on the total or partial availability of mothers at home.

Table 12. Labour market participation patterns of couples aged 29-49 years, by family configuration, Switzerland, 2012

	All Swiss couples		Youngest child	Youngest child	
	(25-49 years)	No children	aged below 6	aged 6 years and	
	(23-43 years)		years	above	
Both full-time	26.4	55.3	11.7	15.5	
Man full-time /	39.1	21.7	44.1	50.1	
Woman part-time	39.1	21.7	44.1		
Man full-time /	20.1	9.0	28.6	21.2	
Woman at home	20.1	9.0	20.0		
Both part-time	4.2	3.0	6.0	3.5	
Other	5.7	8.1	4.5	4.7	
Total (%)	100	100	100	100	

Source: UNECE data base.

In the Swiss case women are thus are expected to achieve an acceptable level of "work-life balance" by adjusting their own labour market participation patterns to the structural unavailability of their male partners and to the absence of alternative and affordable child-care solutions (Bütler & Ruesch, 2009).

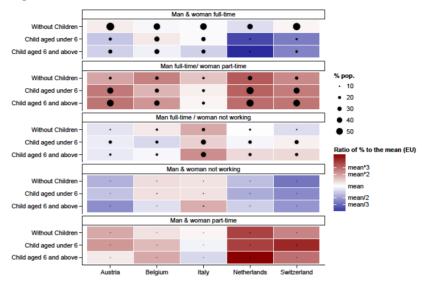


Figure 6. Labour market participation patterns of couples aged 29-45 years, by family configuration, selected countries, 2012

Source: UNECE data base

In Figure 6, we have attempted to represent the variability of these "work-family configurations" in comparative perspective. Unfortunately, comparable data for Iceland and Slovenia is not currently available in the UNECE database. Although regrettable, this is not so important because, as we have seen, these are the two GARCIA countries where motherhood has the lowest impact on women's labour market participation patterns; full-time employment for women and dual-earner couples represent the majority practices, whatever the family configuration.

In this comparison, we can see quite clearly the specificities of the (Southern) Italian gender regime alluded to earlier. In the absence of widespread part-time employment opportunities, Italian mothers of young children tend to leave their (full-time) jobs and to retreat from the labour market, rarely returning once their children have reached school age, and almost never to the part-time jobs that are so prevalent for mothers of school-aged children in the Netherlands and Switzerland, for example.

These differing gender arrangements are not only indicative of the dominant value systems in a given national context (at a given time, of course), they also act as predictors of likely practices in the future. In countries where married women and particularly mothers are expected to reduce their professional availability for an undetermined period of time, academic institutions will adopt specific employment contracts that are compatible with this discontinuous engagement with paid employment. In such cases, women who intend to pursue an upwardly mobile career trajectory in research will be required to demonstrate the distance they

intend to put between themselves and this normative, female pattern of work-life balance; either by not forming a stable, residentially tied couple and/or by not having children.

In countries where partnered men and women and parents are expected to maintain a continuous and full-time commitment to the labour market, the pressure placed on "ambitious" academic women to distance themselves from the symbolic figure of the stay-at-home / part-time working mum is obviously reduced. Having a career and a family and combining simultaneous commitment to the two is likely to become the dominant norm, for men and women alike. This is not to say that women in such contexts do not face discrimination in the academic labour market – very probably they do. It is simple to stress that conjugal or parental status won't take on the same structural significance as in other national contexts.

Given the strong variation in the influence of motherhood on women's labour market participation patterns, there seems to be absolutely no good reason to suppose that personal living arrangements, parental status or care responsibilities should have a univocal and systematic influence on women's research productivity and/or on their career opportunities. Recognition of the highly variable effect of motherhood on women's employment patterns (and domestic commitments) could perhaps help to explain why research carried out on the effect of parenthood (usually motherhood, in fact) on research productivity has produced some very **inconclusive evidence** (Hunter & Leahey, 2010; Krefting, 2008; Marsh *et al*, 2009; van Arensbergen *et al*, 2012; Yu & Shauman, 1998, 2004).

Since the social significance of motherhood varies significantly from one national context to another, it is hardly surprising that having children does not always influence women's scientific output in identical ways!

3.3. Comparing women's risk of unemployment and precarious jobs

In addition to the variable "motherhood effect", part of the differences in women's employment rates between countries can be explained by the levels of unemployment (see Table 13), which are particularly high for young people (under 25s) in Belgium, Italy and Slovenia. In general, low unemployment rates reduce the number of "discouraged workers", i.e., the technically unemployed workers who drop out of the labour market once they are do not qualify for or are no longer entitled to benefits. Since qualifying for unemployment benefit is usually harder for women than for men (due to their discontinuous and potentially part-time employment histories), high levels of unemployment disproportionately reduce female employment rates, since unemployed men generally do not have the option of adopting the "full-time homemaker" status that may still be available to women who are unable to find a job in many national contexts.

Table 13. Unemployment rates of women and men, by age group, selected countries, 2013

Country	20-24 years		25-49 years		50-54 years		55-59 years	
	Men	Women	Men	Women	Men	Women	Men	Women
Austria	8.1	7.8	4.6	4.7	3.5	3.0	3.7	3.3
Belgium	-	21.9	-	7.6	-	4.7	-	5.8
Iceland	8.2	6.2	5.0	5.7	2.8	-	3.5	-
Italy	36.6	37.8	12.0	13.5	7.3	6.9	5.9	4.5
Netherlands	8.8	8.8	5.9	5.2	5.5	5.0	6.3	5.7
Slovenia	22.9	25.1	9.6	10.8	10.1	9.4	7.5	6.9
Switzerland	8.4	8.0	4.3	4.5	3.1	2.8	3.1	3.1

Source: Eurostat

Somewhat surprisingly, the gender gap in unemployment is relatively small in all of the GARCIA countries and in every age group. However, it is quite likely that the particular difficulties facing young people in Belgium, Italy and Slovenia during the transition from education to the labour market will affect the gendered nature of early academic careers in these countries. When the risk of youth unemployment is high, even temporary, fixed term and poorly paid research jobs will attract a large number of applicants, since they appear to offer a form of protection against the risk of unemployment, both immediately and in the future. Low youth unemployment rates probably imply increased attention to the quality of post-doctoral jobs, since PhD graduates are more likely to seek better opportunities outside of the academy when these are readily available.

In **Belgium**, education and regional location have a far more significant influence on unemployment rates than gender. The highest rate concerns the least-qualified groups and the risk of being unemployed is particularly important for the least qualified workers in the Brussels-Capital region (34.7% for men, 30.7% for women, as against 9.2% and 8.4% respectively in the Flemish region). These figures drop considerably as levels of education increase, but regional variations do not entirely disappear. For the most highly qualified groups, the unemployment rate is 9% for women and 11.9% for men in the Brussels-Capital region, 6.4% for women and 5% for men in the Walloon region, 3.2% women and 3.8% for men in the Flemish region. As we see, contrary to the situation at the beginning of the 2000s, the male unemployment rate is not systematically higher than that of women for the whole of the country (Fusulier *et al*, 2015: 68-69).

In countries where young (well-qualified) people have not borne the brunt of the 2008 economic crisis to the same extent as in Italy, for example, the proliferation of precarious and unprotected (sometimes pseudo-) employment contracts has been less spectacular. Nevertheless, even in countries with relatively low youth unemployment rates, a large potential supply of foreign PhD graduates willing to accept such degraded employment conditions may reduce the protection offered by the buoyant alternative local labour markets. In recent years, this would have seem

to have been the case in Switzerland, were the explosion of precarious, fixed-term post-doc positions has been accompanied by a spectacular increase in the number of foreigners working in the HE research sector, particularly in the STEM field (Bataille & Posse, 2015).

So, although highly qualified PhD graduates are always better protected against the risk of unemployment than other groups of young workers, they are nevertheless affected by the general economic downturn, which encourages what Robert Castel has called the "precariat" (Castel, 2007; Armano & Murgia, 2013), a phase of capitalist development where jobs lose their capacity to provide workers with a living wage and with a full range of social protection, including unemployment benefit, health care and pension rights.

In Italy, various recent labour market reforms have resulted in a significant increase in the share of precarious jobs, particularly amongst the younger generations and for women. About one in four people aged 15 to 34 has a temporary or collaboration contract, with the proportion increasing to 31.7% amongst university graduates. A third of workers aged 35 to 49 years are also recruited to these kind of precarious jobs. University graduates are much harder hit by the recession in Italy than in most other EU countries; the employment rate for recent graduates is below 70% in 2014. Graduates in the Humanities and in the Sciences are equally concerned by a difficult labour market transition: 12 months after graduation, unemployment rates stand at more than 40%, whereas the rate for "Health and Welfare" graduates is below 10% and that for "Engineering" students about 30%. Within this difficult context, male graduates eventually fare better than their female counterparts: five years after graduation, almost 80% of them have a permanent contract, compared to 67% of the women graduates. Their average wages are also 22% higher than those of similarly qualified women (Bozzon et al, 2015: 8-10).

It is obviously impossible to understand the mechanisms behind and the meaning of the more or less rapid feminisation of academic occupations without some consideration of parallel evolutions on the wider labour market in each national (and local) context.

3.4. Comparing the full-time / part-time divide in women's employment

Just as it is important to understand the overall economic climate in which men and women are deciding to embark on an academic career (or not), so is it necessary to establish what those decisions mean, in relation to the dominant form of gender division of labour in their immediate social environment. In addition to employment rates, the proportion of women working in atypical forms of work is probably one of the best indicators of variations in the national (and local) "gender regimes".

Table 14. Percentage of part-time and full-time employment amongst men and women aged 25-49. selected countries. 2013

agea 25 15) Selected Countries) 2025									
Country	Total % part-time	Male part-time rate	Female part-time rate	% of women amongst part-timers	% of women amongst full-timers				
Austria	26.9	7.8	47.8	79.9	34.7				
Belgium	21.6	6.0	39.3	79.4	34.9				
Iceland	14.8	5.7	24.9	72.2	41.2				
Italy	18.5	7.0	34.1	74.1	34.5				
Netherlands	43.4	16.5	73.0	70.5	21.5				
Slovenia	5.9	3.3	8.8	60.5	43.7				
Switzerland	35.1	11.9	62.1	77.2	28.2				

Source:

 $http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_social_policy_equality/equality/indicators_gender$

Table 14 indicates quite clearly the huge range of gender norms that women in GARCIA countries are likely to encounter in the course of their childhood socialisation and their adult lives. One the one hand, the Netherlands and Switzerland stand out as countries where men and women have similar overall activity rates (high employment rates for both sexes), but where their labour market participation patterns are nevertheless very distinct. Here, over 60% of working women have part-time jobs. In both cases, these atypical employment contracts tend to take the form of "half-time" positions, at 50-60% of the standard working week. In both these countries, the rate of male part-time employment is also higher than the EU average, although male part-timers tend to be concentrated at the two extremes of the age range (amongst young workers and seniors), whereas part-time rates for women are particularly high in the middle age range (during their "child-rearing" years).

The part-time activity rate for women is also high in Austria (nearly half of working women have part-time jobs), but they nevertheless represent quite a larger share of full-timers (35%, as compared to just 21% in the Netherlands). Belgium, Italy and Iceland make up an intermediate group, with approximately a third of all employed women in part-time jobs.

The interesting exception here is **Slovenia**, where part-time employment is extremely rare, for men and for women. This is obviously a legacy of the communist era, when women's full-time labour market participation was actively encouraged be the government, through a combination of relatively generous childcare provisions and the imposition of male salaries below what could be considered as a "family wage". Since 1991, Slovenia has experienced dramatic economic and social transformations, notably the transition from state socialism to a market economy. However, in contrast to many of the other former Eastern block countries, the conditions that made

women's full-time labour market participation possible in the past have been maintained, and even reinforced in some domains. Despite a small increase in part-time employment rates: from 5.8% in 2003 to 8.1% in 2008, this form of employment is still marginal in Slovenia. Several reasons explain the predominance of full-time employment for women, including mothers. First, wage levels are relatively low in Slovenia, making part-time employment difficult to imagine for most households with dependent children to care for. Secondly, the social security system makes part-timers relatively more expensive for employers than full-time workers. Finally, generous (paid) maternity, paternity and parental leave arrangements, along with comprehensive schooling for young children (76% of under 5s attend nurseries / kindergartens, almost always on a full-time basis) (Cernic-Istenic et al, 2015: 194-201).

Once gender differences in working time are taken into account, the distribution of countries according to the full-time equivalent employment rates changes quite considerably from the pattern observed previously. As shown in Figure 7, for the EU-Member States, Italy still has the lowest full-time equivalent employment rate, sharing a large gender gap with the Netherlands and Austria.

30 MT 🔺 25 كَةُ 25 غ 20 IT 🌢 Gender gap 15 FS 10 5 35 40 45 50 55 60 Total FTE employment rate (%)

Figure 7. Gender gaps and full-time equivalent employment rate in EU-Member States (15+), 2012

Source: EIGE, 2015: 29

In Austria, there are signs that younger generations of men would like to be more involved in "active parenting", but they feel that the opportunity to reduce their working time is limited, both by the social stigma associated with part-time jobs for man and by employers' reticence in developing flexible working practices in male-dominated occupations. From a legal perspective, the right to work on part-time basis is actually quite restrictive: it is limited to parents of young children who work in companies with more than 20 employees and who have been there for more than 3 years. A study by Schiffbänker and Holzinger (2014) on the influence of organizational cultures on men's involvement in family life in research occupations has shown that minority of men who take parental leave do so on the basis of what they perceive as feasible and acceptable in their institutions, rather

than on the basis of their own desires or the needs of their partners (Holzinger *et al*, 2015: 263).

The prevalence of part-time work for women in different national contexts is an important factor to consider when comparing their access to academic research occupations. If the criteria for professional excellence normally require researchers to work full-time, this will present more of a challenge to women in countries where the vast majority of their female friends, neighbours and family members are working part-time, since these dominant gendered working practices are always accompanied by a specific set of beliefs and values as to what is best for women to do, particularly when they become mothers (Pfau-Effinger, 1994). Similarly, one could imagine that academic institutions will adapt to the dominant pattern of women's labour market participation, notably by developing part-time teaching and research positions and/or by adopting rules and regulations for the integration of part-time working into their standardised recruitment and promotion procedures. The effect of such measures is likely to be double-edged for most women: allowing them unlimited access to the lower reaches of the academic hierarchy, but reinforcing the "masculine culture" of the most prestigious academic positions. At the same time, it is widely recognised that the availability of part-time professional jobs in "vocational" occupations such as research may serve to limit the tensions around the domestic division of labour and to encourage the reproduction of relatively conservative "gender arrangements" in the private lives or male and female academics.

3.5. Comparing parental support policies and practices

As we have seen, becoming a mother doesn't appear to have an identical effect on women's academic career aspirations and chances in all national (or local) contexts. This is notably because the social significance of motherhood varies considerably across welfare regimes, but also because institutional arrangements for promoting the "reconciliation" of family life and employment are based on potentially different gender arrangements. In the European context, so-called family-friendly policies demonstrate a complex mix of de-familialisation programmes (provision of preschool childcare services and domestic care vouchers, for example) and of decommodification tendencies (care leave policies, for example) (Esping-Andersen, 2009; Fusulier, 2011). In some cases, women are encouraged to externalise care activities, thus freeing themselves (at least partially) from the moral obligation to provide direct support to their loved ones. This is seen as an active employment creation policy, because it encourages the development of new jobs in the Education, Health and Social Services sector (European commission, 2010). In other cases, men and women are encouraged (through various income supplement measures) to interrupt their employment careers in order to provide care and support directly to young children and dependant adults. This is seen as a means to reduce the welfare budgets of Europeans nations, by encouraging employers to recognise the need of their workers to "balance" their commitments to

employment and to their family, friends and local community). In most countries, we find different combinations (welfare mix) of de-familialisation and decommodification measures, making the identification and analysis of an overall national "care regime" quite complex.

As indicated in Table 15, GARCIA countries also demonstrate a variety of "work-life balance" policy measures, which can be addressed exclusively at mothers, at fathers or at both parents.

Table 15. Fertility rates, mean age of women at birth of 1st child, and maternity /

paternity / parental leave arrangements, selected countries, 2012

Country	Total Fertility Rate	Mean age of women at birth of 1 st child	Length of (paid) maternity leave (weeks)	Length of (paid) paternity leave (weeks)	Length of (paid) maternity & parental leave (weeks)
Austria	1.4	28.2	16	26	78
Belgium	1.8	28.2	15	14.4	28
Iceland	2.0	26.8	13	13	26
Italy	1.4	30.2	21.7	0	48
Netherlands	1.7	29.4	16	0.3	42
Slovenia	1.6	28.7	15	13	52
Switzerland	1.5	30.2	14	0	14

Source: UNECE Statistical Database, OECD and Cernic-Istenic et al, 2015: 200.

Switzerland represents the "base line" of parental support policies: a relatively short duration of paid maternity leave (a right that all Swiss mothers only obtained in 2005), no legal paid paternity leave (although many employers do provide new fathers with 1 or 2 days leave, sometimes up to a week) and no additional parental leave (except 1 month for mothers who are still breastfeeding at the end of their legal maternity leave). In this context, new mothers are expected to return to work when their new-born child is only 4 months old, despite the absence of affordable childcare provisions for young babies. It is thus hardly surprising that, as we have seen, many of them decide to leave the labour market at this point, or to return to work on a (short) part-time basis. As in Switzerland, becoming a parent also seems to be considered as something that only affects the lives of women in Italy and the Netherlands, where there is also no legal provision for (paid) paternity leave. In the remaining countries, there has been a concerted policy effort in recent years to share the symbolic and financial cost of parenthood more equally between both parents. Men's entitlement to leave the labour market on the birth of a child has been increased in Slovenia, Iceland, Belgium and Austria, although take-up rates of parental leave opportunities by men continue to vary across counties and between socio-professional categories (see: Cernic-Istenic et al, 2015; Fusulier et al, 2015; Gustafsdottir et al, 2015; Holzinger et al, 2015).

According to the latest European Commission/SHE Figures report, the proportion of researchers with children is systematically higher than the percentage of fathers and mothers in the working population. In the absence of data for Austria and Switzerland, this correlation is confirmed for all of the other GARCIA countries. The gap is particularly large in Iceland and Slovenia, where women researchers are 10% more likely to have children than their compatriots working in other employment sectors, as indeed are their male counterparts (European Commission/SHE Figures, 2013: 100).

It would be tempting to conclude that the multiplication of gender-neutral "family-friendly" or "work-life balance" measures would play a significant role in promoting women's academic careers, notably by contesting collective representations of science as a solitary and ethereal activity, distinct from the mundane preoccupations of daily life as well as with emotional engagement and empathy with others (Gardey & Löwy, 2000; Harding, 1987; Haraway, 1988). However, existing research suggests that the widespread provision of parental support policy measures is rarely enough to improve the work-life balance experiences of academics. In countries where competition is particularly intense during the early stages of an academic career (corresponding to the ages when men and women are likely to be thinking about having children), the take-up rates of existing maternity, paternity or parental leave measures can be particularly low. This is because the parents of young children fear that a demonstration of anything less than "total commitment" to their research activities could be detrimental to their chances of being selected for a permanent or tenured position.

In the French-speaking part of **Belgium**, over half of female PhD graduates and a quarter of their male counterparts cite the difficulties in combining research activities with having children as one of the main reasons that would discourage them from undertaking an academic career (Meulders *et al*, 2012). In addition, a recent qualitative study of postdoctoral researchers working in universities (Fusulier & del Rio Carral, 2012) found that 20% of mothers and 52% of fathers had not taken the totality of their legal maternity or paternity leave. In addition, 92% of mothers, 79% of childless female post-docs, 77% of fathers and 75% of childless men declared that taking parental leave or a career break for family reasons would have a negative effect on their ability to compete for a permanent position in the academy (Fusulier *et al*, 2015: 74).

Even in countries with a long and impressive record of policies in favour of combining employment with parenthood and in favour of men's participation in family life, such as Slovenia and Iceland, there is plenty of evidence to suggest that the objective weight of having a child continues to fall disproportionately on women's shoulders (their share of domestic labour increases with the birth of a child, for example).

In **Iceland**, the country that has topped the World Economic Forum Global Index for 6 years in a row, women continue to shoulder the main share of domestic work and family responsibilities, in addition to their paid jobs (Pétursdottir, 2009). In 2010, Icelandic women spent an average of 12.8 hours a week on housework, as compared to men's 8.7 hours. Likewise, in married or cohabiting couples with children, women spent almost 33 hours a week on childcare, whilst men only spent 19 hours on such activities). This male participation in family life is a significantly higher than in most other European countries and it seems to have increased even further since the 2008 economic and financial crisis that hit Iceland very hard. However, it is still quite a long way off the "domestic parity" than one could expect from the most progressive nation on the planet (Gustafsdottir *et al.*, 2015: 127).

Furthermore, taking parental leave does not have the same consequences for the career progression of mothers and fathers. Even in countries with the most generous support for working parents and a commitment to increasing men's participation in family life, men tend to reap a "paternity bonus" in terms of career progression, whilst women continue to pay a "motherhood penalty". As elsewhere, this differential, symbolic retribution of extra-professional events in the lives of academics seems to exist relatively independently of their **actual** (relative) contribution to domestic and childcare activities on a daily basis (Latour & Le Feuvre, 2006).

CONCLUSIONS

Somewhat paradoxically, the fact that women are *universally* under-represented in practically the same proportions at the top of the academic professional hierarchy in every national context has tended to foster the belief that the reasons behind this vertical segregation must be relatively similar across national boundaries. Thus, although studies of women's academic careers usually mention the institutional and societal contexts under consideration, there is a distinct lack of *conceptually comparative* research perspectives on this topic (Le Feuvre, 2015b).

It is quite frequent for data from one – eminently *situated* – study to be used to justify the adoption of a particular equality measure in a totally different institutional setting, without any consideration for the possible influence of contextual factors on the results observed in the first instance. As a result of this tendency to over-generalisation, academic equal opportunity offices and policy makers are often confronted with a piecemeal array of studies from a variety of sources, making it difficult to establish the precise mechanisms behind women's "limited career prospects" (Danell & Hjerm, 2013) or underpinning various forms of "gender segregation" (Ecklund *et al*, 2012) in a given country, region, institution or discipline. Although we have no desire to deny the potentially shared experiences of women in academia in different national (or local) contexts, this comparative policy background report reflects our convictions that research on the "gender and science" topic would benefit from a more *sophisticated conceptually comparative*

perspective. As we have demonstrated here, women (and men) in the early stages of an academic career may not be facing exactly the same structural and normative opportunities and constraints in all national contexts. In this report, we have focussed on different dimensions of gendered scientific careers that require more attention to societal communalities and specificities.

First, we have argued that the macro-level employment, care and gender regimes within which men and women are making decisions about their (preferred) professional and private lives manifest quite considerable variation across the countries included in the GARCIA project. What it means to be a well-qualified woman (or man) is clearly not the same in Slovenia and Switzerland, or in Belgium and Italy. Without greater attention to the normative framing (imposition) of a particular pattern of "doing gender" (West & Zimmerman, 1987) in these different national contexts, we can't really understand the potential rewards and penalties awarded to women who attempt to cross the threshold of the historically "male" bastion of the academy.

Secondly, it is clear that, despite convergent international trends in favour of transparency and accountability in academic evaluation procedures, what it means to be an academic and the criteria used to select and promote members of this occupation still manifest a considerable degree of national (or local) specificity. Academic occupations are not structured in exactly the same way in all national contexts. The proportion of fixed-term and precarious jobs, in relation to the percentage permanent and tenured positions is highly variable, both between countries (cf. Appendix 4) and over time. It would be analytically misleading to compare women's career trajectories within scientific occupations without taking the structural, nationally specific characteristics of the academic labour market into consideration.

Finally, academic occupations do not occupy the same position in the socioeconomic hierarchy in all national contexts. The relative attractiveness of a scientific career, in comparison to the alternative employment opportunities open to male and female PhD graduates, can't be presumed to be equivalent across national boundaries. Indeed, the relative rewards and opportunities offered by academic careers must be analysed in relation to the specific internal structure of the academic labour market (proportion of fixed-terms or permanent positions, duration of the pre-tenure career stage, relative levels of pay and other perks, length of working week, opportunities for flexible employment practices, etc.) and in relation to the dominant model of gender relations (sexual division of paid and unpaid labour, availability of affordable childcare solutions, moral stigmatisation or acceptance of full-time working mothers and/or of family-committed fathers, etc.).

In this report, we hope to have identified just some of the characteristics that distinguish women's experiences of working in the academic labour market in the different GARCIA countries. Our aim is to integrate these national (and local) specificities fully into the tailor-made gender equality action plans that we will be elaborating in the subsequent phases of the GARCIA project.

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APPENDICES

Appendix 1. Gender Equality Index Domains and Indicators

Domain	Conceptual framework	Measurement framework	Concept measured — original framework	Concept measured — updated framework	
Work	Participation	Participation	FTE employment	FTE employment	
	Participation	Participation	Duration of working life	Duration of working life	
	Segregation		Sectoral segregation	Sectoral segregation	
	market of south	Segregation and quality of work	Flexibility of working time	Flexible personal/family arrangements	
	Quality of work	PLAN.	Health and safety	Work Intensity	
			Training at work	-	
Money	Financial resources	Financial resources	Eamings	Earnings	
	Thursday R. John C. J	T T T T T T T T T T T T T T T T T T T	Income	Income	
Money	Economic situation	Economic situation	Poverty	Poverty	
	ECONOMIC SIQUION	ECONOMIC SILUACION	Income distribution	Income distribution	
	Educational attainment	Educational attainment and	Tertiary education	Tertiary education	
Knowledge	Segregation	segregation	Segregation	Segregation	
	Lifelong learning	Lifelong learning	Lifelong learning	Lifelong learning	
	Economic		-	-	
Time			Childcare activities	Childcare activities	
	Care activities	Care activities	Domestic activities	Domestic activities	
Time			Sport, culture and leisure activities	Sport, culture and leisure activities	
	Social activities	Social activities	Volunteering and charitable activities	Volunteering and charitable activities	
	Political	Political	Ministerial representation	Ministerial representation	
			Parliamentary representation	Parliamentary representation	
Power			Regional assemblies representation	Regional assemblies representation	
	Social	-	-	-	
	Economic	Economic	Members of boards	Members of boards	
	ELOHOITIC	ECONOMIC	Members of central banks	Members of central banks	
			Self-perceived health	Self-perceived health	
	Status	Status	Life expectancy	Life expectancy	
lsb			Healthy life years	Healthy life years	
Health	Behavlour	-		-	
			Unmet medical needs	Unmet medical needs	
	Access	Access	Unmet dental needs	Unmet dental needs	
Intersecting Inequalities			Employment rate of minorities and/or migrants	Employment of non-nationals vs nationals	
	Discrimination and other social grounds	Discrimination and other social grounds in employment	Employment rate of older workers	Employment of older workers vs workers aged 15 to 54	
			Employment rate of lone parents/carers	Employment of lone parents vs single persons without children	
Violence			-	Disclosed violence against women since the age of 15	
	Direct	Violence against women	-	Disclosed violence against women over the 12 months prior to Interview	
	Indirect	Norms, attitudes, stereotypes	-	-	

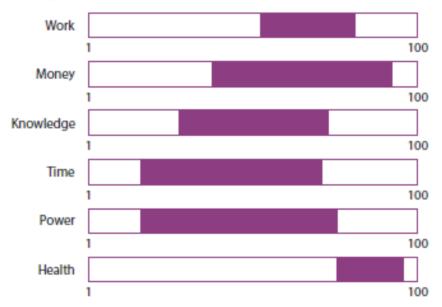
Source: EIGE, 2015: 18-19.

Appendix 2. EIGE Framework for measuring the quality of work

Domain	Measurement framework	Concept measured	Indicator	Source
	Participation	FTE employment rate	Full-time equivalent employment (%, 15+ population)	Eurostat — EU Labour Force Survey
		Duration of working life	1)uration of working life (years)	
Work	Segregation and quality of work	Segregation	Employment in Education, Human health and Social work activities (%, 15–64 employed)	Eurostat — EU Labour Force Survey
		Flexible personal/ family arrangements	Ability to take an hour or two off during working hours to take care of personal or family matters (%, 15+ workers)	Eurofound — Working Conditions Survey
		Work intensity	Working to tight deadlines (%, 15+ workers)	Eurofound — Working Conditions Survey

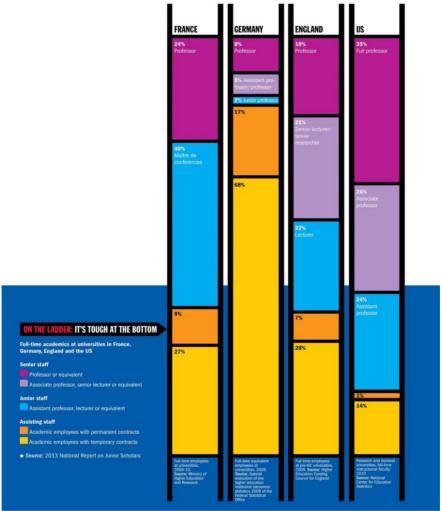
Source: EIGE, 2015: 23.

Appendix 3. Dispersion of EU-Member States on the Gender Equality Index, by domains, 2015



Source: EIGE, 2015: 116.

Appendix 4. The Structure of Academic Careers in Germany, France, the United States and the UK.



Source: OECD

Appendix 5. Country total average yearly salary of researchers by type of contract, 2006.

Country Total yearly salary Average of researchers in EU25 and Associated countries per type of contract (2006, N=6110, all currencies in EURO)

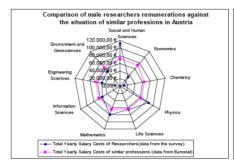
contract (2006, N=6110, all currencies in EURO)						
	Type of contract					
Country/Type of				Fixed-term		
contract	Full time	Part Time	Permanent	Regular employment	Non- employment	Total
Austria	64.124	54.091	79.074	45.956	49.624	46.261
Belgium	48.193	52.447	74.249	47.341	22.978	35.729
Bulgaria	3.903	-	4.193	2.441	1.525	1.678
Croatia	20.553	34.336	25.817	12.834	12.638	12.831
Cyprus	48.143	17.341	47.590	49.894	33.705	46.951
Czech Republic	23.599	17.448	27.906	17.501	33.907	17.932
Denmark	69.044	59.852	75.136	52.491	41.801	49.959
Estonia	13.492	8.700	14.723	12.329	4.358	11.846
Finland	40.075	37.818	50.641	36.123	17.580	32.509
France	57.123	60.555	68.441	36.996	24.830	31.293
Germany	51.725	42.971	75.922	45.715	27.021	39.320
Greece	30.709	24.849	36.999	22.054	17.040	19.765
Hungary	18.744	19.075	20.970	14.811	7.872	13.571
Iceland	52.205	-	55.289	12.147	42.920	27.534
Ireland	54.221	50.701	90.211	48.219	27.096	37.148
Israel	56.274	23.043	61.545	23.228	36.521	28.545
Italy	34.932	39.136	49.957	28.938	16.105	19.407
Latvia	10.726	12.000	10.726	-	12.000	12.000
Lithuania	13.780	11.236	15.655	9.459	13.962	9.724
Luxembourg	62.757	56.000	69.872	42.019	18.000	37.215
Malta	29.955	26.539	29.282	-	-	-
Netherlands	68.021	69.782	90.717	45.136	16.451	37.313
Norway	65.650	61.657	68.631	61.013	48.105	56.366
Poland	14.523	9.571	15.849	10.356	11.084	10.441
Portugal	24.545	22.504	46.904	30.774	12.831	15.907
Romania	7.557	7.227	7.616	3.621	10.078	6.850
Slovakia	9.890	10.243	11.746	8.688	6.284	8.304
Slovenia	29.954	-	37.140	20.047	10.800	19.645
Spain	31.913	34.397	49.335	27.012	14.968	20.666
Sweden	63.655	61.565	79.829	44.530	24.452	37.268
Switzerland	94.025	85.774	117.745	65.805	28.854	61.983
Turkey	19.956	25.000	19.954	21.740	16.556	20.839
United Kingdom	54.514	57.786	73.255	44.044	29.823	37.602

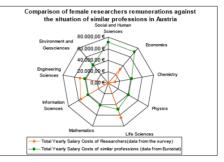
Table 50 - Country Total Yearly Salary Averages of researchers in EU25 and Associated Countries per type of contract (2006, N=6110, all currencies in EURO)

Source: European Commission / CARSA, 2007: 171.

Appendix 6. The relative remuneration of research careers and alternative occupations, by field and sex, 2006

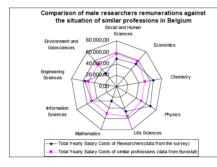
6a. Austria

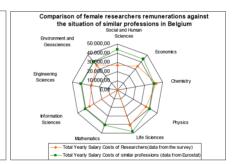




Source: European Commission / CARSA, 2007: 185.

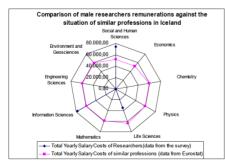
6b. Belgium

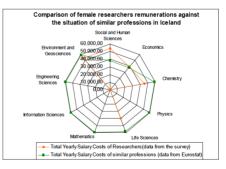




Source: European Commission / CARSA, 2007: 186.

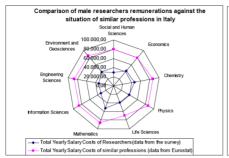
6c. Iceland

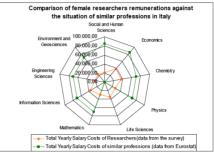




Source: European Commission / CARSA, 2007: 197.

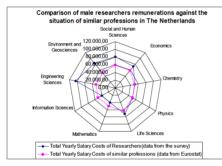
6d. Italy

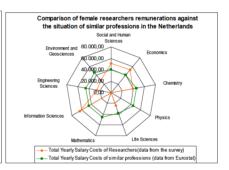




Source: European Commission / CARSA, 2007: 199.

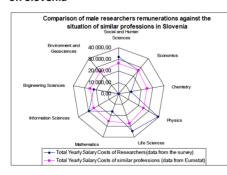
6e. Netherlands

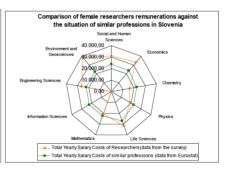




Source: European Commission / CARSA, 2007: 204.

6f. Slovenia





Source: European Commission / CARSA, 2007: 210.

6g. Switzerland

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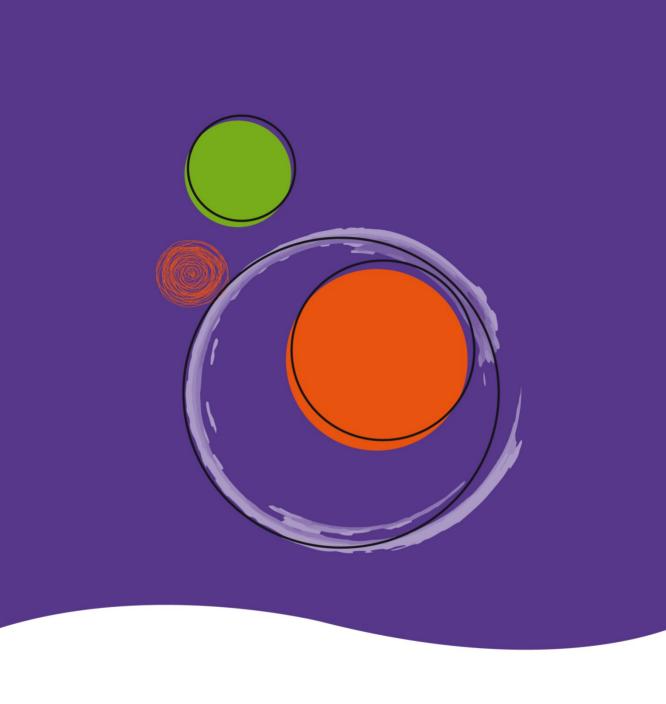
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