

Integrating gender equality into academia and research organisations Analytical paper



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1. Introduction

This paper presents the results from an analysis of the main policies, legislative frameworks, and other initiatives to support institutional change for gender equality in academia and research institutions in the European Union. The analysis comprises the EU level as well as other national legal and policy initiatives in the Member States. The paper focuses on incentive factors identified in the Member States for promoting the uptake of gender equality initiatives by research and higher education institutions. The focus of the analysis herein has been on public research and higher education institutions have taken up the challenge of tackling gender inequalities within their organisations.

The research on which this paper is based took place in the autumn of 2015. Data were collected in all EU Member States, departing from existing information and materials gathered in the context of various EU-funded projects. While these materials primarily focused on the policy level, the information contained in these sources has been verified, updated and complemented with new information on gender equality work within research-performing institutions. This is where the main and particular added value of this research lies.

The scope of the national fieldwork covered the period between 2010 and 2015 and comprised:

- legal and policy framework to promote gender equality in (public) research;
- other incentive measures (for instance programmes, awards or other initiatives that are not part of the policy framework, not being initiated by public sector actors);
- gender equality plans (GEPs) (¹);
- examples of tools, instruments, approaches and initiatives undertaken by research and higher education institutions, as well as evaluation reports.

For each country, the following resources have been analysed (in no particular order) $(^{2})$:

- Erawatch, the European Commission's information platform on European, national and regional research and innovation systems and policies: country profiles;
- European Commission, Gender equality policies in public research (2014), report and country information (the latter is confidential);
- European Commission, European Research Area facts and figures 2014, country fiches;
- GenPORT, Analysis of policy environments (D4.1) (2015);
- EIGE, country-specific results about the status of gender mainstreaming in research policy in the EU-28, from the Review of the institutional capacity and effective methods, tools and good practices for mainstreaming gender equality in a few selected policy areas within the European Commission, the Member States and Croatia (EIGE/2012/OPER/25-126A);
- European Commission, *Researchers' report 2014 —* A selection of good practices;
- EU-funded institutional change projects (³): list of projects and contacts of coordinators, partners and evaluators;
- other info: suggestions about good practices as proposed by the expert group supporting the project.

Desk research included internet searches, documentary reviews and analyses, and interviews with experts, performed to validate and complement the available information as well as to collect and map information on the state of play of gender equality work in research and higher education institutions. Special attention was paid to GEPs implemented within the framework of EU-funded structural change projects (seventh framework programme (FP7) and Horizon 2020).

⁽¹⁾ According to the European Commission's communication on 'A reinforced European research area partnership for excellence and growth' (COM(2012) 392 final), a GEP aims at conducting impact assessment/audits of procedures and practices to identify gender bias, implementing innovative strategies to correct any bias, and setting targets and monitoring progress via indicators.

⁽²⁾ Note: the Gender-Net project reports were not yet published when the work for this analytical paper was done.

^{(&}lt;sup>3</sup>) Specific projects by the EU under FP7 and Horizon 2020 aimed at promoting institutional change and implementing comprehensive gender equality action plans in participating research and higher education institutions. Although the concept of structural change has initially been used in policy documents and in funding research frameworks, it has been replaced and referred to as institutional change in the European Research Area (ERA) communication and in the Council conclusions. In this analytical paper, both concepts are used.

The paper is structured along three main sections. Section 2 introduces the legal and policy frameworks for mainstreaming gender equality into research-performing organisations at the EU and national levels. Section 3 focuses on what is implemented at the institutional level by and in research and higher education institutions. This section also takes a closer look at the existing GEPs and the types of approaches, methods and tools implemented within the framework of such GEPs. Finally, Section 4 presents the conclusion from the analysis, outlining the main lessons learnt and identifying the main issues to be taken into consideration in order to move forward.

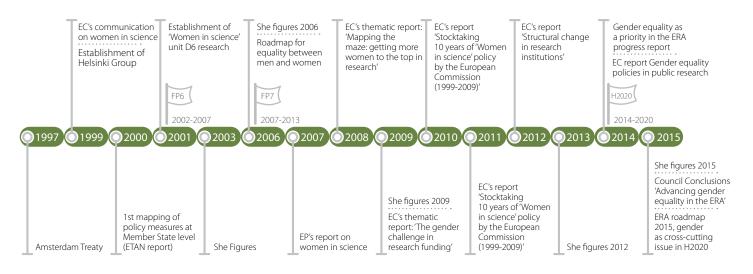


2. The integration of gender equality in academia and research at EU and national levels: state of play

2.1. Main policy developments at the EU level and initiatives in EU Member States

The value of gender equality is enshrined in Articles 2 and 3 of the Treaty on European Union (TEU) and Articles 8, 10, 19 and 157 of the Treaty on the Functioning of the European Union (TFEU). It is further implemented through Directive

2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast). For nearly 15 years, the European Commission has shown continuous efforts to strengthen gender equality and to include a gender dimension into research content in the ERA. The diagram below summarises some main milestones covering the integration of gender in EU research policies.



Since 1999, when the European Commission's first communication, Women and science (European Commission, 1999), was published, a change in the policy approach started to be noticed. From individual support measures aimed at enhancing women's capacity to meet the institutional academic requirements, the focus shifted to the institutions — which are likely to produce and reproduce gender inequalities and bias through their organisation and governance. Encompassed in the notion of 'structural change', this approach has since 2010 funded specific projects under the FP7. The first projects, funded under the FP7 from 2010 to 2012, promoted cooperation between research and higher education institutions. A number of systemic organisational approaches were identified and common actions were suggested to increase the recruitment and career progression of female researchers. The FP7 work programme of 2013 further developed the notion of structural change by adding objectives, such as improved working conditions for

women and men, and the integration of a gender dimension in curricula and research content. Under the Horizon 2020 work programmes of 2014-2015 and 2016-2017, the focus was directed to supporting research and higher education institutions in order to implement GEPs that remove barriers to the recruitment, retention and career progression of female researchers, address gender imbalances in decision-making processes and strengthen the gender dimension in research content. Since 2010, participating organisations are required to design and implement a GEP with the necessary structural changes adjusted to the specific situation and challenges of the organisation. In 2013, an analysis of the main problems and challenges as well as planning of specific actions were introduced. Since 2014, research and higher education institutions and/or research-funding organisations (RFOs) are required to promote systemic institutional changes, in particular through the implementation of GEPs that are in line with the definition provided in the ERA communication of 2012. According to this definition, the GEPs of research and higher education institutions should include an impact assessment/audits of procedures and practices to identify gender bias, the implementation of innovative strategies to correct any bias and targets and indicators to monitor progress.

In parallel, the European Commission has since 2009 been undertaking action to address gender bias in research content and knowledge production. These efforts started with the publication of Toolkit — Gender in EU-funded research (European Commission, 2009) and the launch of a training programme consisting of a 1-day training session on gender equality in research for the European research community. Within the framework of this programme, 74 training sessions have taken place throughout Europe. In January 2011, the European Commission set up the expert group 'Innovation through gender', which aimed at further developing the gender dimension in EU research and innovation. To match the global reach of science and technology, case studies and methods of sex and gender analysis were brought together through international collaborations. One of its outcomes is the gendered innovations project (4).

Currently, three objectives underpin the European Commission's strategy on gender equality in research and innovation policy:

- fostering equality in scientific careers;
- ensuring gender balance in decision-making processes and bodies;
- integrating the gender dimension in research and innovation content, i.e. taking into account the biological characteristics and the social features of women and men.

More specifically, as laid out in the European Commission's communication for a reinforced ERA (2012), the EU Member States are encouraged to:

- create a legal and policy environment and provide incentives to:
 - remove legal and other barriers to the recruitment, retention and career progression of female researchers while fully complying with EU law on gender equality (i.e. Directive 2006/54/EC);

- address gender imbalances in decision-making processes;
- strengthen the gender dimension in research programmes;
- engage in partnerships with funding agencies, research organisations and universities to foster cultural and institutional change on gender — charters, performance agreements and awards;
- ensure that at least 40 % of the under-represented sex participate in committees involved in recruitment/ career progression of staff and in establishing and evaluating research programmes.

More recently, in 2015, the Council of the European Union called on Member States and the Commission to start implementing top action priorities in the ERA roadmap 2015-2020. One of these priorities refers to 'translating national equality legislation into effective actions to address gender imbalances in research institutions and decision-making bodies and better integrating the gender dimension into R & D policies, programmes and projects'.

In December 2015, the Council of the European Union reaffirmed its commitment towards 'advancing gender equality in the ERA' by encouraging Member States to make institutional change a key element of their national framework on gender equality in research and innovation, and by incentivising research and higher education institutions to revise or develop GEPs, to strive for guiding targets to ensure a gender-balanced representation of professors, to support flexible and family-friendly working environments, and to review the assessment of researchers' performance in order to eliminate gender biases.

The European Commission monitors and regularly publishes reports (for example *She figures*) on gender equality in research in the EU. As mentioned in the latest ERA progress report (2014) and in a report based on the survey among the Helsinki Group members (*Gender equality policies in public research*, 2014), efforts devoted to involve and retain more women in knowledge-production activities (Objective 1 of the EU objectives), as well as to integrate a gender perspective in research (Objective 3), are made in a number of Member States. These policies differ in terms of scope (from individual support or field-specific measures to a more structural approach), institutionalisation, resources and instruments.

⁽⁴⁾ http://ec.europa.eu/research/swafs/gendered-innovations/index_en.cfm?pg=home

Basing itself on the Euraxess *Researchers' report 2013*, the European Commission's report about gender equality policies in public research (⁵) identifies 15 Member States (⁶) that opted for adopting quotas or soft targets to achieve gender equality in decision-making positions of research bodies.

However, despite the fact that comprehensive, fully fledged GEPs, including capacity-building instruments such as gender training and awareness-raising initiatives, are considered paramount to achieve organisational and cultural transformation, only a few Member States (7) had (by 2013) adopted resolute policies to encourage research and higher education institutions to adopt such plans at the national level. According to the European Commission, in 2013 GEPs were implemented in 11 Member States (8). Another finding is that the gap between pro-active and inactive countries tends to widen, while their overall classification remains the same, with only limited changes. Differences among Member States in tackling the issues of women in science and the gender dimension of research are not merely grounded in diverging models or in differences in institutional settings for the governance of public research; they account for the (non-)existence of gender equality mechanisms at a central policy level or the presence (or absence) of gender-related objectives in research planning or funding. Factors such as the autonomy of research and higher education institutions in recruiting and promoting researchers and deciding about their research priorities and strategies play an important role in the development of gender-sensitive research policies.

In addition, the mapping of policies adopted in the EU for enhancing gender equality and gender awareness in research and higher education institutions has to date neither been exhaustive nor primarily focused on identifying good, transferable practices supporting the effective implementation of such policies EU-wide. However, initiatives promoting the exchange of good practices have increasingly been taking place to ensure that efforts undertaken at the levels of Member States and research and higher education institutions are cumulative. For instance, it is one of the main objectives of Gender-Net, an ERA-Net project, to map out policies currently implemented in the EU and to provide a finer-grained picture of such initiatives. Simultaneously, institutional change projects currently funded under FP7 and Horizon 2020 are increasingly engaging in networking activities in order to share both practices and resistances in implementing GEPs. Some of those projects are also producing common guidelines and tools to support institutional transformation: for instance, Integer (2012-2015) developed online guidelines for GEPs'

implementation, whereas EGERA (2014-2017) notably aims at disseminating a 'structural change toolkit' by the end of the project.

2.2. The integration of gender equality in research organisations of EU Member States

Compared to the EU level, gender equality policies in public research bodies, and their institutionalisation through policy and supporting initiatives, is much more complex at the level of the Member States.

Firstly, despite converging factors triggered by Europeanisation and international competition, the organisation of knowledge production in research and academic institutions still varies considerably between national contexts. National models of knowledge production offer different challenges and/or opportunities to gender mainstreaming policies. These conditions are subject to evolution, whereby national models are undergoing considerable changes throughout the EU towards a greater autonomy in research management, a reinforced role of research-funding organisations, and fierce international competition for reputation, talent and excellence.

Secondly, legislative and policy frameworks for integrating gender in research institutions differ to a large extent between Member States, as do general anti-discrimination and gender equality legislation and policies, as well as provisions and policies regulating science, innovation and higher education. Such diversity of gender equality and anti-discrimination regulations can be partly explained by the interplay of domestic and EU-driven variables. Among the most relevant domestic variables, the state governance system (unitary vs. federal or decentralised) plays a crucial role, as multilevel governance offers different conditions to policy transfers and institutional isomorphism (Alonso and Forest, 2012). But this is also the case of 'policy styles', which determine to a certain extent how gender equality policies are being planned and implemented, and by whom (Richardson, 2006). Among other intervening factors in defining these policy styles, the extent to which policies rely on hard and/or soft law matter (Beveridge and Velluti, 2008). The domestic impact of EU policies, or the role of the private and non-profit sector in stimulating gender policy initiatives, constitutes other relevant variables for explaining this diversity.

^{(&}lt;sup>5</sup>) European Commission, DG Research and Innovation (2014). Gender Equality Policies in Public Research. Based on a survey among Members of the Helsinki Group on Gender in Research and Innovation, 2013. Authored by Anke Lipinsky.

⁽⁶⁾ BE, DK, DE, IE, EL, ES, FR, IT, LU, HU, AT, PL, SI, FI and SE.

⁽⁷⁾ ES and AT; in DK, FI and SE workplaces over a certain size are legally required to have gender action plans.

⁽⁸⁾ BE, DK, DE, EE, ES, HR, AT, RO, FI, SE and UK.

2.2.1. Overview of laws, policies and initiatives promoting gender equality in (public) research

Legislating gender equality in research and higher education

The purpose of Directive 2006/54/EC (recast) is to ensure the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation. The directive contains provisions to implement the principle of equal treatment in relation to: (a) access to employment, including promotion, and to vocational training; (b) working conditions, including (gender) equal pay, return from maternity leave, paternity and adoption leave, and sexual harassment; and (c) occupational social security schemes. It also contains provisions to ensure more effective implementation by the establishment of appropriate procedures. Although this directive applies to research and higher education institutions as employers, some EU Member States have developed specific legal and policy frameworks to achieve the overarching objective of mainstreaming gender equality in public research and higher education institutions. This objective explicitly features in the general equality and/or anti-discrimination legislation of 14 EU Member States (9). In most cases, it is the status of higher education institutions and research organisations as public bodies and employers which determines whether they are explicitly covered by the general equality and/or anti-discrimination legislation. These provisions primarily target equality in the workplace, equal access to decision-making positions and fighting sexual harassment and discrimination.

In Denmark, Estonia and the United Kingdom, references to integrating gender in research and higher education institutions are to be found only at the mentioned level. However, in 12 Member States (¹⁰) they are complemented by more specific provisions enshrined in legislations on higher education and research, either at the national and/or subnational levels.

In Germany, the Framework Act for Higher Education (*Hochschulrahmengesetz*) of 2007 makes it compulsory for universities to promote the realisation of gender equality (with regards to access to decision-making) and lists compliance with this provision as one of the criteria for public funding. These provisions are detailed and reinforced at the regional level (Länder), although with local specificities. Additionally, as for research organisations, the Federal Equality Law (*Bundesgleichstellungsgesetz*) features the obligation to

develop a GEP. In Spain, there is a similar legislative framework in place through different legislations. The objective of increasing the participation of women in research decision-making was already present in the Act on Effective Equality between Men and Women (2007) and the Universities Act (2007) through specific provisions calling for the revision of gender bias in recruitment and accreditation procedures and for the removal of existing barriers. This concept was broadened to integrate gender issues in research topics by incorporating gender mainstreaming as a guiding principle of the entire research and innovation system, as stated in the 13th Additional Clause of the Science, Technology and Innovation Act (2011). As in Germany, subnational governments, which play a significant role in higher education and research, have been keen to adopt their own legislative provisions in regard to this matter.

In France and Sweden, specific provisions enshrined in legislation on higher education and research, also contribute to make these legislations consistent with broader commitments towards gender equality. In France, the Act on Effective Equality between Men and Women (2014) and the Law on Higher Education and Research (2013) mirror each other, building a consistent legislative framework for mainstreaming gender equality in research and higher education institutions. It must be noted, however, that the impact of such provisions is not necessarily proportional to their scope. For instance, in Belgium, the narrow focus on access to decision-making positions (through the implementation of quotas at the federal and the Flemish region levels) triggered resistance, which eventually led to the adoption of much broader policy initiatives (¹¹).

Specific provisions requiring research and/or higher education institutions to implement structured GEPs exist only in eight EU Member States (12). Entrenched in equality and anti-discrimination legislation or in higher education and research policies, they differentiate from each other in several ways. In Hungary and the United Kingdom, these provisions require research and higher education institutions to adopt broader equal opportunity schemes. In Germany, they are held in federal law (for research organisations) and Länder legislation (for universities), while in Austria the obligation to adopt a GEP only applies to universities. Geographical coverage may also vary, as in the United Kingdom these provisions do not formally apply to Northern Ireland. Yet, except in Hungary, provisions on GEPs are embedded into a comprehensive legislative framework tackling gender equality in research and higher education institutions both at the level of general gender equality laws and legislation on science and higher education.

⁽⁹⁾ DK, DE, EE, IE, EL, ES, FR, IT, LT, AT, PL, FI, SE and UK.

^{(&}lt;sup>10</sup>) BE, DE, IE, EL, ES, FR, IT, LT, LU, AT, PL and SE.

^{(&}lt;sup>11</sup>) As described by the national researcher, boards of Flemish universities were reluctant to implement quotas. Their reluctance was addressed by gender equality advocates as a window of opportunity for adopting broader strategies, without undermining the legally binding implementation of quotas.

⁽¹²⁾ DE, ES, IT, HU, AT, FI, SE and UK.

Country	In equality and/or anti-discrimination legislation	In legislation on research and higher education	Legal provisions on GEP
AT	Yes	Yes (for higher education institutions)	Yes (for higher education institutions)
BE	No	Yes (regional)	No
BG	No	No	No
СҮ	No	No	No
CZ	No	No	No
DE	Yes (federal for research organisations)	Yes (federal and Länder)	Yes (federal for research institutions; Länder for universities)
DK	Yes	No	No
EE	Yes	No	No
ES	Yes (national and regional)	Yes (national and regional)	Yes (national and regional)
FI	Yes	No	Yes
FR	Yes	Yes	No
GR	Yes	Yes	No
HR	No	No	No
HU	No	No	Yes (equal opportunities plans requested for state-owned entities)
IE	Yes	Yes	No
IT	Yes	Yes (narrow focus)	Yes
LT	Yes	Yes	No
LU	No	Yes	No
LV	No	No	No
МТ	No	No	No
NL	No	No	No
PL	Yes	Yes	No
РТ	No	No	No
RO	No	No	No
SE	Yes	Yes	Yes
SI	No	No	No
SK	No	No	No
UK	Yes (England, Wales and Scotland)	No	Yes (England, Wales and Scotland), broader equal opportunities schemes

Table 1. Legal framework: provisions on gender equality in research and higher education institutions

Source: EIGE; information collected through the study's fieldwork.

Policies to integrate gender in research and higher education institutions

Policies on the integration of gender in research and higher education institutions also vary considerably. Such policies do exist in 22 Member States (¹³) as strategies and/or framework documents. Interestingly, they exist in countries such as the Czech Republic, Hungary and Slovenia which do not have legal provisions on integrating gender (equality) in research, whereas in Austria, the legislative framework does not feed into similarly comprehensive policies. In Slovenia, a commission for women in science was established

⁽¹³⁾ BE, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LT, LU, HU, AT, PT, SI, SK, FI, SE and UK.

as early as 2001 at the Ministry of Education and Science, and a set of measures regarding research and higher education have been implemented as part of the national programme on equal opportunities since the early 2000s; however, this has not led to legislative changes.

These policies also differ by their scope. In 16 (14) out of 22 Member States where policies are in place, they primarily address equality in participation in research activities (from recruitment to appraisal and career management) and gender balance in access to management and decision-making positions. Yet in five countries (15), these basic elements are not even present. For example in Greece, only work-life balance is considered; in Portugal, policies refer to basic enabling conditions such as producing sex-disaggregated data and establishing a partnership between equality and research governance bodies; and in Ireland, the aim is to support research and higher education institutions' involvement into the private Athena SWAN initiative. Reversely, in Sweden or the United Kingdom, the unspecified scope of these policies provides evidence of the more institutionalised nature of the integration of gender in research and higher education institutions. In the United Kingdom, general obligations falling into the equality duty are well defined by law and are translated into practice at the level of research and higher education institutions. Therefore, the policy mainly aims at monitoring this implementation process. Similarly, in Sweden, obligations in terms of equal opportunities, and notably the obligation made to public organisations including research and higher education institutions to adopt action plans, are verified through policy setting targets for the recruitment of female professors and assessing GEPs adopted at the institutional level.

Some countries have policies with a more specific scope: policies on the integration of a gender perspective in knowledge production are present in three countries (i.e. Czech Republic, France and Finland), while policies on the integration of gender in curricula are present in four (i.e. Belgium, Croatia, Slovenia and Finland). Although often located under measures to promote the enrolment and retention of women in science, work-life balance is made more explicit in French and Spanish policy documents as well as in measures directed at fighting gender-based violence.

Another point of divergence is whether or not these policies support the implementation of GEPs. This is the case in eight Member States (¹⁶), where different initiatives exist to support the mainstreaming of gender through GEPs. There is limited financial support through the European Structural Funds in Portugal, but strong incentives in the United Kingdom, where public organisations are obliged to have equality objectives and schemes and are hence encouraged to adopt GEPs. A similar case is Sweden, where the government recently performed a general assessment of compulsory equal opportunity plans adopted by the 42 public research and higher education institutions.

Finally, it shall be mentioned that beyond gender equality mechanisms and research governance bodies, RFOs seem to be increasingly involved in implementing these policies. The architecture of research funding in the EU has been undergoing significant changes over the past decade, such as the reinforcement of the project-oriented nature of research funding, the creation of new funding agencies, and new forms of evaluation and criteria for grating funding. As part of these changes within the broader context of the construction of an ERA, gender equality is being paid greater attention. In no less than 15 Member States (17), RFOs have taken initiatives in this realm. These include in the first place considering gender equality when granting funds to research institutions (Estonia, Luxembourg, Slovenia, Finland and the United Kingdom), as the United Kingdom Research Council, which integrated the assessment of gender equality policies in its research excellence framework to accede funding, or the National Institute for Health Research, which included scores in the Athena SWAN scheme as eligibility criteria for funding. Due to the role played by the Equality Challenge Unit (ECU) through the successful promotion of the Athena SWAN Charter, the United Kingdom has certainly taken the most promising step in linking excellence, access to funding and equal opportunities. Another promising example is the adoption of the first gender equality policy in October 2015 by the Technology Agency of the Czech Republic. This was the first gender equality policy ever adopted by a state institution in the country, thus showing that research support agencies can play a significant role in integrating gender in research and higher education institutions.

In Spain, France or Portugal, RFOs have shown different degrees of support to research on gender by, for example, integrating women and gender studies as a specific area. Before being heavily hit by the crisis, Spain had granted significant funds to research on gender. In Germany or Sweden, contributions of RFOs took different forms. While in Sweden funds have been made available over a short period to support GEP implementation in research and higher education institutions, in Germany a programme funding full professorships for women has revealed successful and highly competitive for universities.

 $^{(^{14})\;}$ BE, CZ, DK, DE, EE, ES, FR, HR, IT, LT, HU, AT, SI, SK, FI and SE.

⁽¹⁵⁾ IE, EL, PT, SE and UK.

⁽¹⁶⁾ BE, DE, CY, PT, SK, FI, SE and UK.

⁽¹⁷⁾ CZ, DK, DE, EE, ES, FR, LU, MT, NL, AT, PT, SI, FI, SE and UK.



Country	Policy strategies and documents	Scope of policy strategies and documents	Policy support to GEPs	Gender equality policy in research funding
AT	Yes	Gender balance; gender pay gap	No	Yes
BE	Yes (regional)	Gender balance in decision-making positions; recruitment and career management; gender courses in curricula	Yes (Flanders)	No
BG	No	-	No	No
СҮ	Yes	-	Yes	No
CZ	Yes	Gender balance in decision-making positions; equal opportunities in careers; development of gender knowledge	No	Yes
DE	Yes	Gender balance in decision-making positions; equal opportunities in careers	Yes	Yes (funding of full professorships)
DK	Yes	Gender balance in decision-making positions; equal opportunities in recruitment and careers; retaining women in science	No	Yes (initiatives on gender equality funded by RFOs)
EE	Yes	Gender balance in decision-making positions; equal opportunities in allocating grants	No	Yes (access to grants)
ES	Yes	Career development; parity in decision-making positions; training; work-life balance; fighting gender-based violence	No	Yes (funding of research on gender in social sciences and humanities)
FI	Yes	Reinforcing gender mainstreaming in higher education and science policy; integration of gender perspective in teaching and research; promoting women's research careers	Yes	Yes (gender equality considered for funding)
FR	Yes	Gender-sensitive career development; parity in decision-making positions; training for gender equality officers and managers; work-life balance; fighting gender-based violence; integrating gender perspective in research	No	Yes (gender as one of the priority axes of the French National Research Agency (ANR) for its current programme)
GR	Yes (limited)	Work-life balance	No	No
HR	Yes	Gender balance in decision making positions; introducing courses on gender in curricula	No	No
HU	Yes	Equal participation of women in science; research on gender equality; mainstreaming gender in discourse and research-related events	No	No
IE	Yes (recent and limited)	Support to the Athena SWAN Charter and review of gender equality policies in research and higher education institutions	No	No
ІТ	Yes (not implemented)	Equal participation of women in science	No	No
LT	Yes	Gender equality aspects in all procedures in the institutions; support gender balance in decision-making positions; training and awareness raising	No	No
LU	Yes	-	No	Yes (gender equality as an indicator for framework contract with the Ministry of Higher Education and Research)
LV	No	-	No	No
МТ	No	-	No	Yes (established network for supporting women researchers)

Table 2. Policy framework on gender equality in research and higher education institutions

Country	Policy strategies and documents	Scope of policy strategies and documents	Policy support to GEPs	Gender equality policy in research funding
NL	No	-	No	Yes (grants for female career promotions)
PL	No	-	No	No
РТ	Yes	Production of sex-disaggregated data; partnership between equality body and research governance body	Yes (limited: potential use of European Structural Funds for funding GEPs)	Yes (funding of research on gender)
RO	No	-	No	No
SE	Yes	Fixing targets for recruitment of female professors (regulation letters); committee with a fix mandate established to assess gender equality policies in higher education	Yes (review of gender equality policies in higher education institutions performed in 2013-2014)	Yes (funding of gender equality policy initiatives at the level of higher education institutions, limited over time)
SI	Yes (low intensive)	Access to decision-making positions; enrolment of women in research; feminist knowledge transfer	No	Yes (rules for (co)financing and monitoring of research consider gender balance in decision- making positions)
SK	Yes	Gender balance in decision-making positions; work-life balance	Yes	No
UK	Yes	Implementation of the 'equality duty' by public institutions, including research and higher education institutions, derives from a legal obligation; scope determined at institutional level (broader than gender equality)	Yes (public organisations are compelled to have equality objectives and equality schemes)	Yes (United Kingdom Research Council integrated the assessment of gender equality policies in its research excellence framework to accede funding; National Institute for Health Research included scores in the Athena SWAN scheme as eligibility criteria for funding)

Source: EIGE; information collected through the study's fieldwork.

Incentive measures supporting the integration of gender in research

Two initiatives providing incentives for the integration of gender in research deserve special attention. One for its ample country coverage: the L'Oréal–UNESCO awards for female scientists; the other for its considerable impact in its primary scope (STEM) and country of implementation (the United Kingdom): the Athena SWAN Charter.

The initiative funded by L'Oréal and the UNESCO, with the support of local institutions in some Member States, is referred to in 12 Member States (¹⁸). Consisting in awards for female senior researchers and fellowships for doctoral and post-doctoral researchers, the L'Oréal–UNESCO initiative receives significant media coverage in all countries where it is carried out. In countries like the Czech Republic, Croatia, Hungary, Poland or Romania, this prize constitutes the most visible initiative to promote women's contribution to

^{(&}lt;sup>18</sup>) CZ, DK, FR, HR, IT, LV, HU, PL, PT, RO, SI and FI.

knowledge production, and it draws attention to gender inequality in scientific careers. In France, the Joliot-Curie Prize has since 2001 been granted to senior and promising female scientists; it is sponsored by the Airbus Group, which contributes to ensure its visibility.

In the United Kingdom, the Athena SWAN Charter and the awards delivered and managed by the ECU is not the first stimulatory initiative for research and higher education institutions to integrate gender equality: in 1996, the Concordat to Support the Career Development of Researchers was launched to improve the employment and support for researchers and research careers in higher education. However, Athena SWAN, established in 2005, is by far the most visible and successful. Sponsored by major organisations in the field of research (Universities UK, GuildHE, the Higher Education Funding Council for England, the Higher Education Funding Council for Wales, the Department for Employment and Learning in Northern Ireland and the Scottish Funding Council), the ECU is a limited company with charity status; it is not a state agency. The charter aims at encouraging and recognising commitment to advancing the careers of women in science, technology, engineering, mathematics and medicine (STEMM). In 2015, the charter extended to arts, social sciences and humanities, business and law. Charter members are able to submit Athena SWAN awards for institutional and departmental level. A key part of the award application is the submission of an action plan. These plans should be aspirational and innovative, and consider the results of the self-assessment made for the application to the award, including SMART actions, as well as clearly indicate staff's responsibilities to complete the actions of the plan. An independent report on the impact and effectiveness of the Athena SWAN Charter was commissioned in 2013 and showed several positive impacts evidenced by the adoption of action plans in 134 research and higher education institutions, but also the flourishing industry of consultancy to support applicants. However, it is worth noting that the outstanding success of the initiative was reinforced by the adoption of the Equality Act in 2010, which made 'equality duty' an obligation for all public research institutions, thus reinforcing incentives to join the charter. By recently integrating gender equality in its research excellence framework, the United Kingdom Research Council also contributed to this impact.

In response to the interest in the higher education sector, and with support and lobbying from the three structural change projects funded by the EU framework programmes in the country (FESTA, Integer and Genovate), the Athena SWAN Charter also covered Ireland in 2014. A National Coordination Committee was set up to support this expansion.

The Charter for Gender Equality in Higher Education and Research, launched in 2013 by the French Ministry of Higher Education and Research and the Ministry of Women's Rights, also emphasises the positive role of voluntary initiatives. Drawing upon the first charter promoted over the 2000s by the Board of University Presidents and reactivated in 2011, the 2013 charter entails support to set priorities and the commitment to implement a range of measures at the level of the whole institution and towards different audiences (staff, students and researchers). Signed by a number of higher education institutions, this charter helps building awareness on integrating gender equality in research and higher education institutions. This resulted in the appointment of gender equality officers in a growing number of institutions (70 out of 85 in 2015) and the adoption of a number of GEPs. Nevertheless, it differs from the Athena SWAN initiative in different ways: as a public initiative, it lacks the communication strategy and reputational incentives put in place by the ECU and does not enjoy similar public benefits as other labels and charters in the field of equal opportunities in France. Secondly, endorsing the charter, its principles and areas of action did not encourage many universities to develop a strategy of their own, as the content of the charter could be interpreted as self-sufficient and not as a spur to develop more thorough and tailor-made strategies.

In 2008 and 2010, the Danish Ministry for Gender Equality launched two different policy initiatives — the Charter for More Women in Management and the 'operation chain reaction' — which aimed at promoting women in decision-making positions. By signing the charter and engaging in the operation chain reaction, research and higher education institutions pledged to work towards better gender balance within their organisations. However, committing to the charter and this operation was not followed by binding actions or objectives, thus also indicating that for being effective, charters need to provide strong incentives and be embedded in an effective policy framework. In Flanders, the GEPs have emerged as a direct result of the initial resistance of the university boards against the 2012 decrees which made quota mandatory for public higher education institutions. A counter-proposal was to develop homemade GEPs. As a further spur in establishing a GEP, an Interuniversity Gender Equality Charter was agreed at the level of Flanders, containing binding clauses from which GEPs were further derived.

Fieldwork indicates that a number of other incentive structures, complementary to the ones mentioned above, are being enacted in Member States. Some have set timeframes and are supported by substantial funding, as the Delegation for Gender Equality in Higher Education set up in Sweden in 2009-2011 to audit the situation in relation to gender equality in higher education. It also distributed over SEK 47 million to 37 research and action projects at local level in higher education institutions aiming at fostering gender equality (Swedish Council for Higher Education, 2014). Other initiatives are focused on a specific disciplinary field and country, like project Juno, which aims at recognising and rewarding departments that take action to address the under-representation of women in physics, either as practitioners or as supporters. Currently there are 44 Juno awardees in the United Kingdom and four in Ireland.

Also in the field of STEM, in Poland the initiative jointly launched by the Perspektywy Education Foundation and

the Conference of Rectors of Polish Technological Universities includes the national campaigns 'Girls as engineers' and 'Girls go science', which promote technical and engineering studies among female high school students, as well as 'Lean in STEM', a programme which supports the creation of a female networking culture in the technology industry.

2.2.2. Status as regards GEPs in the EU Member States

Number of GEPs and their different use across Member States

According to the inventory carried out as part of this study, there are over 1 100 research and higher education institutions in the EU currently implementing a GEP (19), and over 1 500 GEPs being implemented by research and higher education institutions at the level of their departments or research institutes. Not surprisingly, it is in Member States (20) with a legal obligation (either directly or through the enactment of broader equal opportunity plans) that GEPs are found in greater numbers and in the greatest proportion of research and higher education institutions, namely in Germany (679 equalling the number of research and higher education institutions), Spain (50), Italy (96), Austria (22), Finland (53), Sweden (42) and the United Kingdom (539, of which 537 are linked to the Athena SWAN initiative, running in 136 research and higher education institutions). In all these countries, the number of GEPs in place is close or similar to the number of public research and/or higher education institutions (in Austria GEPs apply only to higher education institutions). In Hungary, only eight equal opportunity strategies were identified, where it was compulsory for public employers to have a gender equality agenda.

In comparison, only 40 GEPs were reported to exist in Member States (²¹) without a legal obligation (some of them supported by EU-funding programmes). The presence or absence of legal provisions and policies supporting GEP implementation, as described in the sections above, is the main, but not the only, variable explaining the adoption of GEPs as a core policy instrument for mainstreaming gender in research and higher education institutions.

Action plans are categorised as soft policy instruments. Even if their adoption is made compulsory by law, their processes of adoption and implementation, and the measures they entail, are not binding in the same way a law or state regulation is. Besides, covering one or several years, they also have a programmatic dimension and are supposed to trigger transformation via a step-by-step process. Soft law and soft policy instruments have played a considerable role in developing gender equality policies, as evidenced by gender mainstreaming itself (Beveridge in Lombardo and Forest, 2012; Beveridge and Velluti, 2008). Yet the literature shows that the use of soft instruments does not have the same effect across the different Member States, given that they cannot be equally transposed into all domestic policy frameworks. For instance, in countries like Belgium, France or Italy, policy action plans have long remained odd to domestic policymaking, outside the realm of economic planning, as hard law remained the main channel to drive policy change. In Central and Eastern European countries, hard law has long been privileged over soft policy instruments, which were developed in relation to gender equality mainly as a result of Europeanisation processes (Forest, 2006; Roth, 2008). More generally, in the realm of gender equality, Europeanisation has been a major drive for the use of GEPs and other soft law instruments, in particular through the use of structural funds. It has been the case in Spain, where GEPs have constituted the cornerstone of further policy developments anticipating the use of hard law (Alonso and Forest, 2012).

For these reasons, it is not surprising that, beyond the (non-) existence of legal obligations, GEPs are being developed to a different extent and pace across EU Member States. Due to their internal nature, adopted and implemented at the level of organisations, gender equality action plans can also be driven by initiatives from outside the policy realm. This is perhaps particularly the case in a field of research and higher education, where organisations often strive for greater autonomy, and in a country such as the United Kingdom, where the private sector is granted a greater role in shaping policy developments. This might explain how the combination of a private-driven initiative (the Athena SWAN Charter) and hard law (the Equality Act and the duties it entails) have converged to make GEPs an integral part of the profile of 136 out of 168 research and higher education institutions operating in this country. Although to different extents, the combination of competition for excellence and good reputation, with a favourable legislative and policy framework, also explains the growing use of GEPs in some Member States such as Belgium (notably in Flanders) or France.

Overall scope and content of GEPs in European research and higher education institutions

Generally speaking, GEPs set up in the EU cover the whole organisation. This is particularly the case when legally binding provisions are in place. In the United Kingdom, however, the Athena SWAN Charter also encouraged the adoption

^{(&}lt;sup>19</sup>) Here we follow the definition provided in the ERA communication of 2012.

⁽²⁰⁾ DE, ES, IT, HU, AT, FI, SE and UK.

^{(&}lt;sup>21</sup>) BE, CZ, DK, IE, FR, LT, NL, PT, RO and SI.

of equality strategies at the level of institutes and departments; for example, over 400 local level GEPs were in place in the United Kingdom in 2015. As for projects supported through EU framework programmes, GEPs, depending on their focus and the size of the implementing institution, are often implemented first at the level of specific faculties or institutes. This is especially justified when they aim to tackle gender inequalities in research and higher education institutions as big as the CNRS, the French National Centre for Scientific Research, which gathers 34 000 researchers and covers all scientific disciplines.

2.2.3. Highlighting domestic trends and Europeanisation effects

The three objectives underpinning the Commission's activities on gender equality in Horizon 2020, in line with the research and innovation (R & I) strategy on gender as well as the objectives set in the ERA communication of July 2012, are not reflected to the same extent in the policies carried out in the Member States. The study indicates that Objectives 1 and 2 (fostering gender balance in research teams and ensuring gender balance in decision-making positions) are addressed by approximately two thirds of EU Member states (²²), which is consistent with the facts and figures ERA progress report of 2014. In comparison, the third objective to integrate gender/sex analysis in R & I content was only found in legal and policy documents and strategies in approximately a third of Member States (²³).

Most of these positive legislative and policy steps have been taken over in the past decade. The most direct spurs for enhancing policies directed to mainstreaming gender in research are to be found at the domestic level, which also includes subnational self-governments in Belgium, Germany, Spain and the United Kingdom. While most initiatives came from public institutions, private-driven initiatives such as the Athena SWAN Charter are also playing a significant role in encouraging research and higher education institutions to integrate gender as a component of their internal policies.

In an innovation-driven and knowledge society, it is not surprising that these policies are primarily inspired by the need to engage more women in all aspects of research and to address the leaky pipeline of women in science. Another factor contributing to the primary focus on addressing numbers, rather than structures or processes, lies in the status of general gender equality and anti-discrimination legislation which has often developed first with regards to the workplace in EU Member States, in line with EU law. This is why research and higher education institutions are compelled to achieve equality in access to decision-making, recruitment and career management due to their status as publicly funded organisations subjected to legally binding provisions in this realm. While this legal baseline is certainly relevant to achieving equality in research and higher education institutions, the approach focusing mainly on bringing and retaining more women in research may have prevented some EU Member States from taking resolute actions. This seems to have been especially the case in those countries where fixing numerical targets through quotas or other positive actions can still be opposed as social engineering. It can be observed that 10 (24) out of 12 countries that did not legislate on gender equality in research are Member States which have joined the EU since 2004, and that seven (25) out of 12 countries that have not yet legislated are former socialist countries, where attempts to improve the representation of women or other disadvantaged collectives is still occasionally read as communist experience of social engineering in form of quota systems implemented for political representation (Forest, 2005 and 2010).

Several variables were identified to intervene in the progress of integrating gender in research and higher education institutions in Member States. Internal competition among research and higher education institutions is one of these variables, as it encourages them to enhance their institutional profile and to build in-house cultures that would be more favourable to their diversity of talents. Reputational incentives as well as competitive advantages in securing talents and funds are playing a crucial role from that point of view. Another variable is the greater role given to reformed or newly established research funding and RFOs. Given their competencies and requirements with regards to research agenda setting and evaluation, to committing to the principles of ethical R & I and to concentrating financial resources, such agencies are likely to play a significant supporting role to mainstream gender in research and higher education institutions. A growing number of RFOs, which are including gender in their evaluation and selection frameworks, both in terms of equal opportunities and gender in research contents, is the first evidence. In the United Kingdom, for instance, the role of the Research Council, which integrated the assessment of gender equality policies in its research excellence framework to accede funding, could be key in the near future to further enhance gender equality policies in research and higher education institutions. In the Czech Republic, the ground-breaking

 $^{^{(22)}\,}$ BE, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, LT, AT, PT, SI, FI, SE and UK.

⁽²³⁾ BE, DK, DE, IE, ES, FR, NL, AT and SE.

⁽²⁴⁾ BG, CZ, HR, CY, LV, HU, MT, RO, SI and SK.

⁽²⁵⁾ BG, CZ, HR, HU, PL, RO and SI.

commitment towards integrating gender on behalf of the National Research Technical Agency will certainly urge research and higher education institutions to take action.

With regard to adopting a broader, more structural approach to the integration of gender in research and higher education institutions, Europeanisation remains a key driver for change. At the legislative level, if general provisions on gender equality refer to EU directives and treaty provisions specified in Section 2.1. of this paper, it is usually not the case for specific gender equality provisions in research, which mainly operate at a domestic level. Still, some indirect evidence of Europeanisation is to be highlighted: in Austria, the strong commitment towards gender mainstreaming, entrenched in the constitution, partly derives from EU accession and is reflected on a comprehensive framework on integrating gender in research. In Spain, the use of EU structural funds fed into a comprehensive approach to gender equality, which is evidenced by provisions regarding gender in research, innovation and higher education sectors. In France, recent legislative advancements reflect a fully integrated and transversal approach to gender in research, in line with the one promoted at EU level.

Yet it is predominantly at the level of policies on research and higher education institutions that signs of Europeanisation can be identified. In Member States such as the Czech Republic, Croatia, Italy, Lithuania, Hungary or Portugal, incipient (and/or low-intensive) policy efforts to integrate gender in research, often in the absence of legal provisions in this matter, are to be related to EU policies, either as part of a broader modernisation effort to access EU research funding (such as in the Czech Republic, Croatia, Lithuania and Hungary) or in line with the management of structural funds (such as in Portugal). At this level, EU-funded institutional change projects also play a significant role in mainstreaming the thorough and structured approach promoted by the European Commission. Both in countries where domestic GEPs abound and those where EU-supported GEPs are pioneering, the latter seem to function as forerunners to develop innovative practices and to integrate a gender perspective in research.

2.2.4. Concluding remarks

This overview of the integration of gender equality in research and higher education institutions in the EU Member States shows that, as in other areas of gender equality policies, diversity is greater than convergence. For instance, although Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast) dates from 2006 (the first directive goes back to 1976), in 2013, according to the report on the application of Directive 2006/54/EC, the European Commission still had questions for most Member States with regard to the effective transposition into national law. The most problematic area seemed to be the practical application of equal pay provisions. Despite the fact that research and higher education institutions are facing common challenges and transformation, as part of the growing Europeanisation and internationalisation of research, domestic frameworks still largely determine how gender aspects are tackled (or not) in research and higher education institutions. This diversity is to be read at the level of legislative frameworks as well as in policies and other incentives. It is also reflected at the level of research and higher education institutions, in the typology of gender equality strategies and measures they put in place.

It is worth noting that in more than one third of EU Member States little is being done to achieve gender equality in research. In these countries, figures relating to the participation of men and women are only considered a matter of time. Where significant steps have been taken, they primarily target research and higher education institutions as (public) work environments where both men and women should be given equal opportunities. Although approaches focusing on women still exist, they nonetheless now coexist with more institutional approaches which help consider career schemes, recruitment and evaluation procedures, as well as paths to gender-balanced decision-making, as key intervention areas for achieving equality. Furthermore, 10 EU Member States (²⁶) have developed policy provisions (including funding programmes) to promote the integration of gender in research and/or teaching content.

Comprehensive, holistic approaches aiming at challenging governance and evaluation rationales to engage the whole research community and make gender equality an integral part of research management are still a minority. Issues such as gender bias in research, gender-sensitive management or gender knowledge production and mainstreaming are left practically untouched in a number of policy contexts. From this perspective, GEPs supported through EU framework programmes, and a few leading initiatives framed at the national level, play a major role in bringing research and higher education institutions forward to integrate gender at institutional level.

This diversity poses a serious challenge for a comparative analysis. As policy focuses are often partial and fragmentary in the Member States, and since policy monitoring and evaluation instruments often do not provide a comprehensive assessment, the analysis carried out at the level of research and higher education institutions lacks information on approaches, tools and instruments developed at the institutional level, and the steps for institutional transformation are not all covered to the same extent.

⁽²⁶⁾ BE, CZ, ES, FR, HR, HU, PT, SI, FI and UK.

3. Approaches to mainstreaming gender equality in academia and research institutions

3.1. Overview of main features of GEPs

Based on the desk research (comprising of internet searches, documentary reviews and analyses) and interviews with experts carried out within the framework of this study, a number of GEPs were analysed more in depth in the countries where these were found (²⁷). Particular attention has been given to GEPs that are implemented with the support of EU-funded institutional change projects (FP7 and Horizon 2020). As a reminder, according to the European Commission's communication, 'A reinforced European Research Area partnership for excellence and growth' (COM(2012) 392 final), a GEP aims at conducting impact assessment/ audits of procedures and practices to identify gender bias, implementing innovative strategies to correct any bias, and setting targets and monitoring progress via indicators.

3.1.1. Relevance of legal, policy and institutional frameworks to GEP implementation

As it has been pointed out in Section 2 of this paper, national legal and policy frameworks for the integration of gender in research differ largely across Member States. In particular, the existence or absence of specific provisions on gender in research in legal documents about gender equality and/or R & I provide very different grounds for implementing gender mainstreaming in research and higher education institutions. As underlined above, other enabling factors are the existence of provisions specifically requiring research and higher education institutions to adopt gender equality policies in the form of strategies or GEPs (²⁸), and of policies supporting the integration of gender equality in research and higher education institutions (including provisions related to recruitment and career promotion of women researchers, as well as gender balance in decision-making positions) (²⁹). Within the EU, only 10 Member States (³⁰) have put in place policies that promote the integration of a gender dimension in research content and/or teaching. As shown in Section 2.2., the existence of legal and policy frameworks promoting research strongly impacts the status of GEPs' implementation throughout the EU.

Institutional frameworks also matter at the level of research and higher education institutions. As has been underlined, they differ in terms of legal status, autonomy, size, disciplinary scope or management structure. Based on the fieldwork carried out for this study, it stems that internal organisational features have a great impact on the GEP implementation as they condition resources, top-management support, capacity to mobilise stakeholders and the different components of the university, as well as decision-making and potential resistances to change. The very objectives of gender equality policies implemented in research and higher education institutions vary depending not only on the status of gender equality within the organisation, but also on its funding, national and international profile, needs in terms of recruitment, audiences and specialisation.

Despite different institutional settings and features, GEPs implemented in research and higher education institutions contain some commonalities. GEPs more thoroughly analysed for the purpose of this study generally address equality in recruitment, appraisal, career management and access to management positions. This can be done through affirmative action, where applicable, to support the careers of female researchers or through mentoring programmes. As part of this endeavour, a greater or lesser emphasis is put on work-life balance and other related issues such as building a gender equality culture and preventing sexist language,

⁽²⁷⁾ Neither the resources nor the available time allowed analysing all existing GEPs in the Member States. In addition, not all GEPs are accessible online. In countries where the total number exceeded 10 GEPs, the national researchers analysed all GEPs funded within FP7 and Horizon 2020 as well as a selected number of GEPs that were suggested by national experts consulted during the fieldwork. The latter stood out because of the approaches followed, because they proposed innovative actions or because of their institutionalisation in the organisation.

⁽²⁸⁾ DE, ES, IT, HU, AT, FI, SE and UK.

⁽²⁹⁾ BE, CZ, DK, DE, EE, ES, FR, HR, IT, LT, HU, AT, SI, FI, SE and SK.

^{(&}lt;sup>30</sup>) BE, CZ, ES, FR, HR, HU, PT, SI, FI and UK.

etc. Awareness-raising actions are usually planned as part of GEPs, although only rarely as part of a broader capacity-building and knowledge-transfer strategy. Fighting sexual harassment and gender-based violence and integrating a gender perspective in research and curricula, as well as tackling intersecting inequalities, receive little attention or do not seem to be present at all in many GEPs. Other commonly recognised features are the lack of monitoring and evaluation instruments, the absence of timelines for implementation and the lack of institutional, human and financial resources to make GEPs sustainable.

Noticeable exceptions to the latter characteristics are to be found in domestically driven GEPs whenever the policy framework is favourable, as was the case in Spain until the early 2010s, in Sweden, or more recently in the United Kingdom. Yet fieldwork indicates that GEPs that have been set up with the support of EU-funded structural change projects are the most likely to embrace a structural approach, primarily targeting institutional change and, hence, to cover a broader set of issues and concerns.

3.1.2. The distinctive nature of GEPs set up with EU support

The EU support to promote institutional change: a historical overview

Within the FP7, which ran from 2007-2013, various structural change projects were supported with the aim of moving the focus from providing support to women towards analysing and changing the working environment and the working culture in research and higher education institutions.

The first FP7, 'Science in society' work programme (published in 2007), included an international comparative survey on the most effective practices adopted worldwide by universities to promote a more gender-aware management (³¹). In 2008, a call was published to fund proposals which identified and analysed European best practices on gender management (³²).

The 2009 topic was 'Involving research bodies in the debate on gender and research' and aimed at encouraging a wide-ranging debate with all major actors invited to discuss and address gender management, especially involving human resources departments or personnel managers. The objective was — and still is — to raise awareness and directly involve the main actors, mainly private and public research and higher education institutions, in the promotion of better employment practices and workplace culture, as well as to integrate equality and diversity. Analysis of factors that limit the participation of women in research, and guidelines on how to implement gender and diversity management, were requested as the final output of the expected proposals ⁽³³⁾.

In 2010 and 2011, the topic was 'Implementing structural change in research organisations/universities'. The European Commission started actively supporting actions to implement institutional change. More specifically, it demanded institutions provide a convincing self-tailored action plan in order to implement the necessary structural changes on the basis of its specific problems, followed by actual implementation. These action plans had to include activities, such as:

- recruitment, promotion and retention policies;
- updated management and research assessment standards;
- course content development;
- leadership development;
- supporting policies for dual career couples;
- returning schemes after career breaks.

A periodic and final assessment of the efficiency of the implemented plans was to be part of the project. In addition, final guidelines for other institutions interested in similar structural approaches had to be prepared and disseminated (³⁴). It was expected that the activities carried out within the project continued in the longer run without EU support.

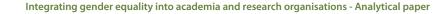
In 2012, the topic demanded for self-tailored GEPs per each participating institution aiming at implementing the necessary structural changes on the basis of each specific situation and challenge. Action plans had to be accompanied by an implementation roadmap containing a clear description of: (1) the challenges existing in achieving gender equality among the organisations concerned and the scientific leadership bodies; and (2) innovative strategies to address barriers for recruitment, retention and advancement of women careers, beyond the lifetime of the grant. The funded projects had to include a methodology for impartially

^{(&}lt;sup>31</sup>) The result of this first activity was the project 'PRActicing gender equality in science' (Prages), which ended in December 2009 and whose major output is the publication of 'Guidelines for gender equality programmes in science'.

^{(&}lt;sup>32</sup>) Two projects were selected for funding: WHIST and Diversity.

^{(&}lt;sup>33</sup>) Two projects were selected for funding: genSET and Gendera.

⁽³⁴⁾ Funded projects are: GENIS LAB and Integer (2010); FESTA and STAGES (2011).



monitoring and assessing — throughout the duration of the project — the effectiveness and the anticipated impact of the actions proposed as well as the institutional progress gradually achieved (³⁵).

Through the 2013 call on 'Gender and research', the supported institutions focused again on GEPs and included monitoring and assessing. This time they were also asked to integrate gender in curricula and research content (³⁶).

Defining GEPs

In 2012, through the ERA communication, a definition of GEPs at EU level was established and was then reflected in the formulation of the topics that followed. Horizon 2020, which started in 2014, continued offering support to research organisations to implement GEPs. However, the topics for 2014 and 2015 required research and higher education institutions, as well as RFOs, to get involved in the consortium for the setting up of GEPs from the starting stage (³⁷).

The GEPs financially supported by the EU

Only a small proportion (21) of GEPs is reported as developed with the support of the European Commission, through the funding of structural change projects. This figure does not correspond to the number of research and higher education institutions currently involved in such projects (as shown in Table 3), nor to the number of projects currently being implemented.

The main reasons for this discrepancy are the following. First, the initial structural change projects funded by EU framework programmes did not require the development of GEPs: it was only after 2010 that this requirement was included in the work programmes of FP7 and Horizon 2020. Moreover, the prominence of this requirement has gradually become more significant throughout the years; since 2014, a stronger focus has been put on GEPs (as defined in the 2012 ERA communication). For instance, the name of the call topic evolved from 'implementing structural change in research organisations' to 'support to research organisations to implement GEPs'. Second, not all structural change projects have the same scope: some focus on specific aspects of women's participation in research, designing a narrower set of measures and instruments, while others adopt a more holistic view to the issue of gender in research and higher education, thus supporting a broader set of actions. Third, not all projects have set up a GEP (yet). And fourth, when a GEP exists in an implementing institution, it does not necessarily originate — at least not completely — from an EU-funded project. This being clarified, the relatively low proportion of GEPs at least partially embedded into structural change projects funded by the European Commission should not lead to underestimation of their impact in making GEPs more visible and legitimate across the ERA. At least in the Czech Republic, France, Lithuania and Slovenia, EU-funded structural change projects have provided one of the main (the Czech Republic and France) or the sole (Lithuania and Slovenia) encouragements to setting up a GEP in research and higher education institutions. In these conditions, structural change projects clearly generate a positive trend, especially when they bring more research and higher education institutions to get involved in participating in such projects, like in the Czech Republic and France.

Yet even where GEPs have also been set up without the support of the European Commission, resulting from locally driven initiatives or legal obligations, GEPs developed or enhanced as part of EU-funded structural change projects are reported to be of a different outreach. While it is clear that the existence of binding provisions and/or external incentives constitute key enabling conditions for research and higher education institutions to develop GEPs, it does not guarantee the quality and transformative nature of the measures adopted. Instead, due to the highly competitive nature and pre-requisites of EU calls, research and higher education institutions applying for EU funding are compelled to build far-reaching, holistic strategies and cumulatively contribute to enhance knowledge on gender in research and the quality of instruments shaped to achieve the three objectives set by the European Commission. Evidences of such a qualitative difference were reported for instance in France, Italy or the Netherlands. Additionally, EU-supported GEPs are also distinctive due to the human and financial resources they rely upon, whereas most GEPs carried out throughout the EU lack proper funds. This enhances their capacity not only to carry out sophisticated diagnoses and draw complex measures, but also to disseminate their outputs. By doing so, EU-funded structural change projects significantly support the diffusion of GEPs as valid policy instruments among research and higher education institutions and RFOs. Last but not least, they also contribute in shaping a community of practitioners driven by common interests who reveal to be able to act beyond their community, as in Ireland, where the extension of the Athena SWAN Charter was notably supported by EU-funded projects.

⁽³⁵⁾ Funded projects are: Genovate and GenderTime.

^{(&}lt;sup>36</sup>) Funded projects are: Trigger, GARCIA and EGERA.

⁽³⁷⁾ Funded projects are: GENERA and LIBRA (2014).

Country	Number of GEPs in institutions (by October 2015)	Number of organisations involved in EU-funded institutional change projects (2014) (1)	Scope (common features)	Institutional coverage
AT	23	GenderTime: 2 GARCIA: 1 Diversity: 1	Taking measures towards equality in recruitment procedures, supporting women's career planning, tackling discrimination; collecting data; making gender equality an element of the university's public profile. To a lesser extent: researching and teaching gender	Whole institutions
BE	6	EGERA: 1 GARCIA: 1	Producing sex-disaggregated data; establishing career management schemes; implementing gender balance and fairness in recruitment and promotion; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions
BG	0	FESTA: 1	-	-
СҮ	0	0	-	-
CZ	2	Trigger: 1 EGERA: 1	Preliminary statistical analysis and periodic data collection; taking measures towards equality in recruitment procedures, supporting women's career planning; implementing gender balance in leadership and decision-making positions; developing work-life balance schemes; addressing sexual harassment; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions (2) Specific faculties (1)
DE	679	STAGES: 1 GenderTime: 1 FESTA: 1 EGERA: 1 Integer: 1 WHIST: 1 Diversity: 4	Varies across Länder and research and higher education institutions. Work-life balance and gender balance in recruitment, career management and promotion seem to be the most common areas of actions. As for the GEP supported by a structural change project: along with abovementioned areas, also includes gender-based violence; gender perspective in research and curricula; access to decision- making; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions in most cases
DK	6	STAGES: 1 FESTA: 1 WHIST: 1	Work-life balance and gender balance in recruitment, career management and promotion; awareness raising seem to be the most common areas of actions	Whole institutions
EE	0	0	-	-
ES	50*	Genovate: 1 GENIS LAB: 2 Trigger: 1 EGERA: 1 Diversity: 1	Varies across research and higher education institutions. GEPs generally include work-life balance and gender balance in recruitment, career management and promotion; access to decision-making positions; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions in most cases

Table 3. number of GEPs and number of EU-funded institutional change projects per Member State



FI53**0All plans address discrimination and harassment, students and teaching, employment (recruitment, career advancement and salary), reconciliation and decision-making. Only some plans discuss research as a separate dimensionFR6GenderTime: 1 Trigger: 1 EGERA: 1 Integer: 1 Diversity: 1Gender equality/balance in recruitment, access to decision-making positions, career management, fighting sexism, harassment (in most cases) and sexual harassment; bringing a gender perspective in research; training staffGR00-HR00-HU8 equal opportunity plans with a gender equality agenda0Gender equality/balance in recruitment, access to decision-making, career management; work- life balance; creating supporting instruments for gender mainstreamingIE10FESTA: 1 Genovate: 1 Integer: 1Focus on gender equality/balance in recruitment, access to decision-making positions, career management; work-life balanceIT96STAGES: 3 GenderTime: 1Work-life balance for equal opportunities plans; broader scope for EU-funded projects,	Whole institutions Whole institutions (5) Specific institutes (1)
Image: Second	institutions (5) Specific
HR 0 0 - HU 8 equal opportunity plans with a gender equality agenda 0 Gender equality/balance in recruitment, access to decision-making, career management; work-life balance; creating supporting instruments for gender mainstreaming IE 10 FESTA: 1 Genovate: 1 Integer: 1 Focus on gender equality/balance in recruitment, access to decision-making positions, career management; work-life balance IT 96 STAGES: 3 GenderTime; 1 Work-life balance for equal opportunities plans; broader scope for EU-funded projects,	
HU8 equal opportunity plans with a gender equality agenda0Gender equality/balance in recruitment, access to decision-making, career management; work- life balance; creating supporting instruments for gender mainstreamingIE10FESTA: 1 Genovate: 1 Integer: 1Focus on gender equality/balance in recruitment, access to decision-making positions, career management; work-life balanceIT96STAGES: 3 GenderTime: 1Work-life balance for equal opportunities plans; broader scope for EU-funded projects,	-
plans with a gender equality agendato decision-making, career management; work- life balance; creating supporting instruments for gender mainstreamingIE10FESTA: 1 Genovate: 1 Integer: 1Focus on gender equality/balance in recruitment, access to decision-making positions, career management; work-life balanceIT96STAGES: 3 GenderTime: 1Work-life balance for equal opportunities plans; broader scope for EU-funded projects,	-
IT 96 Genovate: 1 Integer: 1 recruitment, access to decision-making positions, career management; work-life balance IT 96 STAGES: 3 GenderTime: 1 Work-life balance for equal opportunities plans; broader scope for EU-funded projects,	Whole institutions
GenderTime: 1 plans; broader scope for EU-funded projects,	Whole institutions in most cases
FESTA: 1including mentoring programmes; early-career obstacles; access to management positions; awareness raising and trainingGENIS LAB: 3Trigger: 3GARCIA: 1WHIST: 3Diversity: 1Diversity: 1	Whole institutions in most cases, except for EU-funded projects, targeting departments in most cases
LT 1 Integer: 1 Building gender knowledge; producing data; work-life balance; career management and support; access to decision making positions	Two institutes, later the whole institution
LU 0 0 –	-
LV 0 0 –	-
MT 0 0 –	-
NL 4 EGERA: 1 Gender balance in recruitment, career GARCIA: 1 management and promotion; work-life balance; awareness raising; access to management positions and funding; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions (3) Department (1)
PL 0 0 -	-
PT 3 EGERA: 1 Gender balance in recruitment, career management and promotion; work-life balance; awareness raising; access to management positions and funding; creating supporting instruments for gender mainstreaming; fighting sexual harassment and sexism; bringing a gender perspective in research; training staff	Whole institutions (2) Department (1)
RO 1 STAGES: 1 –	

Country	Number of GEPs in institutions (by October 2015)	Number of organisations involved in EU-funded institutional change projects (2014) (1)	Scope (common features)	Institutional coverage
SE	42	FESTA: 1 Genovate: 1 GENIS LAB: 1 Diversity: 1	A common theme in the GEPs is ensuring that there are equal opportunities at the boards, staff meetings, nominating committees and liaison groups. The GEPs often target the areas of working conditions, recruitment, harassment and discrimination. As for GEPs implemented with the support of EU-funded projects, they have either developed more innovative, ad hoc measures or strived to integrate them in local GEPs	Whole institutions in most cases. Also at departmental level for larger research and higher education institutions
SI	1	GENIS LAB: 1 GARCIA: 1	The GEP addresses different dimensions of organisational culture based on gender audits	Whole institutions
SK	0	GenovatE: 1 Diversity: 1	-	-
UK	539 in 136 research and higher education institutions	GenderTime: 1 Genovate: 1 Trigger: 1 Diversity: 1	537 out of 539 GEPs are linked to signing up to the Athena SWAN Charter, which is based on 10 key principles focussed on gender equality and issues such as the gender pay gap and tackling trans-discrimination. Yet scope largely varies among higher education institutions. Work-life balance, access to decision-making positions, career progression and training are addressed in a number of GEPs	136 research and higher education institutions (out of 168) are implementing GEPs, which means that GEPs are also implemented at the level of institutes or departments

Source: EIGE; information collected through the study's fieldwork

(1) The total number of organisations comprises research and higher education institutions alongside other members of the consortium, including implementing, supporting and evaluation partners.

3.1.3. Approaches/methods and tools/ instruments for integrating gender in academia and research institutions

In this subsection, we refer to the typology developed by EIGE to analyse gender mainstreaming implementation. This typology includes three categories that correspond to different ranges and levels of action when implementing gender mainstreaming.

Approaches/methods consist in a systematic process or a prescribed set of steps to achieve a certain goal/measure. In the context of gender mainstreaming implementation, they relate 'to general methodological approaches that facilitate integration of gender into policies and programmes. They utilise different tools in a strategic way and propose coherent systems (or elements of a system) for gender mainstreaming. (...) They can be combined together to collect information, enhance knowledge and shape largely different programmes' (EIGE's gender mainstreaming platform, 'Concepts and definitions'). Tools/instruments consist in a material aid to support the implementation of a method/approach or initiative. EIGE's definition more specifically refers to 'operationalised instruments, which can be used separately or combined together to shape largely different programmes, in terms of aims, approaches and dimensions. Some are practical, ready to use 'how-to' tools while others are more elaborate combinations of different elements' (EIGE's gender mainstreaming platform, 'Concepts and definitions'). Initiatives are actions to achieve a certain goal which may combine methods/approaches and tools/ instruments.

Comprehensive methodological approaches combining a plurality of tools to support gender mainstreaming implementation are rarely analysed in GEPs. Gender impact assessment, for instance, is referred to only in Finland, with no evidence of a consistent use. Gender auditing, as a consolidated methodology, is present only in Spain, in particular as part of GEPs supported through the EU framework programmes, and Finland, where it is reported to have been used in 2014 at University of Jyväskylä as part of the general quality process. **Gender budgeting** is also only occasionally used. In Austria, where it is firmly rooted into the legal framework, the Ministry for Science pushed higher education institutions to implement first steps towards gender budgeting as part of their performance agreement for 2010-2012. As the policy context is favourable to gender budgeting in Austria, further steps in that direction are likely to be taken. Besides, as part of the EU-funded Genis Lab project, with partners from Germany, Spain, Italy, Slovenia and Sweden, a system for gender budgeting and a gender equality scorecard have been developed. However, little evidence of implementation was found.

Affirmative action appears to be implemented in various contexts, although it is usually tightly framed by the law. In Denmark, the University of Copenhagen has addressed the gender imbalance in management, leadership and decision-making bodies by requiring annual evaluations of the proportion of the under-represented gender in relation to those faculties where the proportion is lower than 40 %. Quantitative targets are fixed for the gender distribution in the different leadership positions. In Finland, many universities make possible or require preferential treatment in the recruitment for under-represented sex in cases of a significant gender imbalance, although earlier studies have found little evidence of the use of this possibility. Also in Sweden, many of the GEPs analysed contain initiatives to increase the proportion of female professors. The specific measure used in order to reach the goal at the University of Gothenburg is the so-called qualification project that gives female senior lecturers (at docent/associate professors level) the opportunity to qualify for promotion to become a professor within a 2-year period. The budget for this project during 2012-2015 was SEK 13 million (EUR 1.4 million) (³⁸). In Sweden, research and higher education institutions are also reported to implement measures to ensure a fair attribution of research grants to researchers of both sexes. Similar projects have been implemented at Linköping and Stockholm universities. Quantitative targets for hiring new assistants and full professors are reported in the Netherlands as well, where quantitative targets are also set for the composition of hiring and selection committees in a number of GEPs (in France too).

The use of **gender training** and **awareness-raising activities** is widespread in GEPs, although with different intensity. In most GEPs, these instruments are used on a relatively ad hoc basis, targeting specific audiences such as human resource managers, scientific managers, gender equality officers and other categories of staff. They appear to be usually disconnected from pre-existing, general on-thejob training programmes. Little information was retrieved regarding the concepts and methodologies used for this type of activity, as they are often carried out with internal resources and more occasionally subcontracted to external experts. Although participatory gender training and awareness-raising sessions are increasingly used (and available) for supporting gender mainstreaming in research and higher education institutions, these activities are not necessarily planned as an integral part of transformative GEPs, nor are they embedded in a broader theory of organisational change. Again, EU-funded structural change projects provide examples where gender training is being used more consistently with the objectives of the GEPs.

Regarding career support, mentoring programmes and individual coaching are relatively widespread and primarily target researchers at an early stage of their career: in Belgium, all Flemish universities have set up (or plan to set up) a mentoring programme to support post-docs in their career. In Denmark, the University of Southern Denmark has created a support programme for young researchers, offering them to take part in a career mentorship programme and/or further education (for instance courses in management or administration grant writing). These mentoring programmes are part of most of the GEPs adopted. In the Netherlands, mentoring and networking programmes are also reported to run in most universities having adopted a GEP. In the United Kingdom, mentoring programmes can be widely found. Several examples can be named, including the gender ambitions programme of King's College London, the 'Beyond barriers' mentoring initiative at Kingston University for students and staff with a particular scheme for female students in science, technology, engineering, mathematics and built environments (STEMB), or the 'Ad feminam' mentoring programme at Oxford University, which encourages women to explore their leadership potential within academic life. The seemingly widespread use of mentoring programmes in the United Kingdom can possibly be associated to the performance-based framing which applies to integrating gender in research and higher education institutions in the country. Support to early-career researchers can nonetheless take different forms. In Germany, several programmes aimed at supporting mobility and project management by early-career researchers have been institutionalised. At the Technical University of Munich, the Munich Dual Career Office provides assistance to dual-career couples, while at the Heidelberg University, the Rahel Goitein-Straus programme provides guidance and funding to women with little research experience in order to enable

^{(&}lt;sup>38</sup>) 50 % being university-wide funds and 50 % being set aside by each faculty/department.

them to conduct a research project at an institution of the Faculty of Medicine and thus to support the transition to independent research.

Initiatives to reconcile work and family/care duties are widely present in GEPs: in Austria, for instance, some research and higher education institutions provide childcare facilities, while many participate in the 'university and family' audit initiative. Further initiatives carried out include 'back to research grants' at the universities of Vienna and Graz. In Belgium, these measures include the provision of day care for children up to the age of three, flexible working hours, telework, and an ironing service. In Germany, the Heidelberg University offers parents and future parents a research and family consultation on reconciling parenthood with a research career. Future parents are invited to negotiate an arrangement with the head of their section or department during a moderated consultation. In Denmark, universities implementing GEPs introduced teaching-free semesters for researchers returning from a parental leave, and offer childcare facilities and financial support due to research stays abroad. In Finnish research and higher education institutions, specific measures for women returning from pregnancy and maternity leave apply, such as temporary dispensation of teaching tasks to catch up with their research. In Flanders, Belgium, support for a work-life balance includes preparatory measures such as a funding pool ('Vervangingsfonds') to hire a temporary lecturer when a female professor is on maternity leave. All French research and higher education institutions implementing a GEP also implement provisions regarding maternity and parental leaves, with a view to facilitate re-integration, to encourage fathers to take parental leave and to accommodate all types of families (including single parents and non-heterosexual families) in the cases of Paris 5 and Paris 7 universities.

Some initiatives are also aimed at integrating a gender perspective in research. It must be underlined, though, that these exist in rather limited numbers and that this kind of initiative is more easily identified at the level of RFOs or nation-wide research institutions (such as ministries of science) and in research and higher education institutions involved in a structural change project. For instance, in Estonia, the Gender Equality and Equal Treatment Commissioner has published 'Topical material on gender integration. Gender equality in the area of natural and technical science'. Funded by the EEA and Norway Grants, this leaflet gives an overview of the goals set in exact and natural sciences to achieve gender equality and serves as the guide to the sources and publications of the institutions that tackle these problems. In August 2015, the Estonian Research Council organised, as part of the COST action, genderSTE, a capacity-building workshop on considering gender aspects in scientific research. Seminars and conferences on integrating gender in different academic disciplines, including in STEM, are thus often nation-wide and not integrated in a GEP.

Although the objective of integrating a gender perspective in research is present in roughly one quarter of the GEPs selected for detailed analysis by national researchers, this proportion is certainly much lower among 'standard' GEPs being implemented across the EU, especially when resulting from legal obligations focusing on equal opportunities in the workplace. In Germany, several initiatives have nonetheless flourished in that respect, including: the Gender in Medicine Working Group (RWTH Aachen), set up in the Faculty of Medicine in 2010 to stimulate gender awareness and a gender-differentiated approach in medicine; the visiting professorship in gender and diversity at the Leibniz University of Hanover, which aims to strengthen the interdisciplinary perspective of women and gender research in the humanities and social sciences, architecture and law; or consulting on the drafting of collaborative research proposals at the Technical University of Berlin, assisting faculties, institutions and individual researchers on the integration of gender and diversity considerations in research projects. **Training** is one of the most used approaches to support initiatives aiming at integrating a gender perspective in research. EU-funded structural change projects address the issue to a greater extent, as they commit to the three objectives of the European Commission. Along with dedicated conferences or workshops, databases of good practices in that field as well as a business case for integrating gender in research and curricula are reported to have been developed under EU-funded projects.

Another emerging approach correlates scientific excellence, performance with regards to gender equality, and access to funding. It can be inferred from different case studies: as noted earlier, in the United Kingdom the research excellence framework, implemented by the United Kingdom Research Council, integrates performance on gender equality in its assessment of research and higher education institutions applying to project funding. Incipient signs of a similar approach are also to be noted at the level of research and higher education institutions through linking performance in promoting gender equality in departments or faculties with access to additional funding to be used for gender equality-related purposes and in coordination with the equal opportunity officer. The same is true for performance-based funding established at the Free University of Berlin, where the model rewards faculties for successful efforts in promoting women, in particular early-career researchers. Another method put in place at there is that of gender controlling, set up as a separate area of activity within the university's reporting process and systems section to support the integration of gender in planning and control processes and to monitor gender equality activities.

In relation to **monitoring methods** implemented through the GEPs, it was highlighted by the national fieldworks that they are largely missing, and primarily consist of periodic data collection. Networks of gender focal persons within a same research and higher education institution and regularly exchanging about progress in the GEP's implementation are also reported in some cases. Monitoring mechanisms can be put in place for the follow-up of specific measures or as part of adopted protocols, in the form of issue-specific monitoring units for sexual harassment. With regard to **evaluation**, it was reported that most of the GEPs lack proper evaluation mechanisms in the frequent absence of measurable targets and/or precise timelines. They are nevertheless present to a greater extent in GEPs supported by EU-funded projects, usually consisting in a set of quantitative and qualitative indicators aimed at measuring the impact of actions taken to increase women's access to certain positions, to enhance work-life balance and women's career management, to train staff in gender equality issues or to integrate gender in curricula.

Tools, such as supporting instruments to effectively implement gender mainstreaming, offer some diversity. As for the diagnosis of gender inequalities and bias in research and higher education institutions, GEPs extensively refer to systematic data collection in the form of **periodic surveys**. As their organisations require resources unless they are institutionalised, among GEPs selected by country researchers, those supported through the EU framework programmes are amongst the most prone to establish periodic data collection.

As sexual harassment in research and higher education institutions is tackled merely in a minority of Member States, only a few protocols or procedures were identified by national researchers. As an example, French universities involved in EU-funded structural change projects, Paris 7 Diderot in Trigger and Sciences Po Paris in EGERA, have established comprehensive protocols to address sexual harassment. While the first opted to externalise monitoring and follow-up, Sciences Po opted for building an inhouse monitoring unit through training, issuing guidelines and visual communication. It appears, however, that dealing with sexual harassment remains problematic in many Member States and that even EU-funded structural change projects encounter difficulties to set up similar approaches. Comprehensive guidelines on dealing with sexual harassment have also been put in place in all selected GEPs in Finland, and protocols have been set up in various Austrian universities.

Guidelines are certainly the most widespread type of instrument developed under GEPs. Their use usually goes with a greater level of institutionalisation and comprehensiveness in GEP implementation. For instance, in Germany guidelines have been produced in various universities on a number of issues: a guide on family leave (University of Mannheim) provides information on processes relating to family leave, different working models available at the university, the university's 'welcome back' programme and several checklists; guidelines on gender-sensitive language at the University of Cologne provide a comprehensive introduction on gender-sensitive language including reasons for it, background information and examples; and guidelines for appointment processes that are fair to all genders at the Ruhr University Bochum provide guidance through all stages of the appointment process and includes detailed information on proactive recruitment. Transparent recruitment guidelines are also in use in Sweden and Finland. Gender-neutral language in job vacancy announcements is also promoted through guidelines. Integer, through which GEPs were implemented in different Member States, has produced guides and templates on how to address the challenges of designing and implementing GEPs.

Several national researchers suggest that projects funded under FP7 and Horizon 2020 are more creative, innovative and ground-breaking in developing tools to support gender mainstreaming in research and higher education: Genovate, for example, has developed a code of practice and is also developing a technical tool — the Gender App, a checklist for the practical integration of gender equality considerations into a project or organisation; FESTA has developed a toolkit consisting of two parts, where the first focuses on quantitative indicators (with the help of, for example, log books and key performance indicators) and the second focuses on more qualitative indicators (for example scripts for dialogues and seminars); Diversity developed recommendations for making recruitment decisions; EGERA developed two **charters** on 'Non-sexist communication' and 'Governance and evaluation', and is putting together a **structural change toolkit** to be completed over the project's duration.

Creating or strengthening support structures for implementing the equality agenda is one of the most common features among GEPs. The creation of supporting structures is a legal obligation in various Member States, including Germany, France or Spain and it is also part of the package of measures of the Athena SWAN scheme in the UK and Ireland. However, supporting structures vary across Member States and from one research and higher education institution to another. From individual, part-time gender equality officers, through ill-funded units to gender equality committees typically consisting of representatives of the (Human Resources) management, different staff groups and faculties and students. In addition to central gender equality (or diversity management) mechanisms, support structures may also include focal persons in all faculties/departments or gender equality working groups in faculties to enhance the implementation of the GEP and improve internal communication on gender equality issues.

Fieldwork also indicates that some large research and higher education institutions introduced **gender-related awards or prizes** for promoting gender equality within the institution, as in several Finnish universities.

3.1.4. Planning, implementation, monitoring and evaluation

Setting up GEPs in academia and research institutions

Initiatives for setting up GEPs depend upon national and internal structures. They include the presence/absence of legal obligations, the existence of an overall policy strategy aiming at integrating gender in research and higher education institutions, and the availability of incentive measures. At the organisational level, the decision to set up a plan is subordinated to factors such as the existence of a gender equality mechanism within the research and higher education institution of other organised advocacy structure, the support of top leadership or the impact of a benchmark indicating that the research and higher education institution is facing specific issues with respect to gender. Access to EU funding is the main external (non-domestic) variable which has the capacity to trigger the setting up of a GEP. Where it is not required by law or strongly encouraged by the policy framework (for instance, to increase chances to access funding), the initiative to set up a GEP usually belongs to research and higher education institutions' gender equality mechanisms. Depending on structures and contexts, top management may exert a greater role in promoting a GEP as part of a broader institutional strategy. As an example, Paris 7 owes the primary initiative of its GEP to its former dean, who then served as the President of the Board of the University Deans in France and who thus enhanced his profile by supporting such a policy.

As it primarily mobilises gender experts, processes of drafting GEPs does not seem to be very participatory: measures are drafted by in-house gender experts (or actors in charge of equal opportunity and gender equality policies) and later submitted for approval to different types of instances. Some research and higher education institutions nonetheless involve other actors in the university, such as the rector, the senate, the labour council or administrative bodies such as units for personnel management or quality assurance, in the process of developing the GEP (e.g. as reported for Austria). Formal validation by the highest management structures, such as the administrative board or the senate of a university, does not appear to be systematic, while it is a key element for legitimising a GEP and making it an integral part of a research and/or higher education institution's profile. This also undermines official communication and dissemination efforts about the plan, and may partly explain that national researchers encountered difficulties to locate GEPs on research and higher education institutions' websites. When mobilised, top management structures do not seem to intervene much on the content of proposed measures, although some debates were reported in case studies. As for gender equality units or offices created at the level of research and higher education institutions,

these were often reported to be ill-funded and ill-equipped in human resources (both from the point of view of time dedication and gender expertise), and their mobilisation on drafting GEPs depends in most cases on the commitment of a few individuals.

Even more problematic is the finding that GEPs do not always rely upon a proper preliminary diagnosis of gender bias and inequalities within the research and higher education institution. Such a diagnosis requires resources and data which are not necessarily made available by departments such as the human resources management in charge of data collection. It also clearly appears that sex-disaggregated data are not systematically collected, as policy initiatives often include measures to require research and higher education institutions to collect such data, and as GEPs also contain actions that not only aim at consolidating indicators or enhancing data collection, but also at basically creating such elementary data. Preliminary diagnoses may also evidence situations which do not match the image the research and/or higher education institution intends to project, both internally and externally. When present, preliminary assessments do not appear to provide in-depth analysis but key figures on sex ratio in different research and academic positions. Additional elements such as data on work-life balance provisions or the composition of recruitment panels can occasionally feature in these assessments. However, in-depth studies that also tackle issues such as the access to decision-making, governance and evaluation procedures, sexual harassment or the use of sexist language, the access to funding or the inclusion of gender in research contents remain the exception. GEP supported by EU-funded structural change projects usually provide more thorough diagnoses due to available resources and the added legitimacy provided by accountability to the European Commission. However, they are not necessarily performed prior to setting up a GEP, which tends to rely upon the preliminary assessment drawn during proposal or kickoff phases.

GEP implementation

As regards task allocation and planning of actions, responsible persons or departments and timelines are not systematically ascribed. In the Czech Republic, for instance, it is reported that GEPs do not identify the responsible person, deadlines or indicators. Similar situations occur for equal opportunity plans carried out in Hungary and part of those implemented in Italy. Yet when GEPs derive from legal obligations, formal responsibilities are more likely to be ascribed, as in Sweden, where GEPs primarily state assignments, targets, measures and the division of duties. Sweden illustrates a case of strong institutionalisation: GEPs are established not only at the level of the whole institution, but also at the level of departments or institutes. It is usually the vice-chancellor (sometimes a deputy vice-chancellor) at the research and higher education institution who has

the overall responsibility to make sure that the university conducts targeted work on gender equality and equal opportunities. Most central GEPs are annually developed in a specific group or committee for equal opportunities. The university board is responsible for taking a decision on the plan. It is the responsibility of deans and heads of department to prepare and develop local GEPs on departmental and school levels that adopt the visions and goals in the research and higher education institutions' central GEP. However, these visions and goals need to be adapted in relation to the conditions in their own school and department. Usually every school or department has their own equal opportunity representative and an equal opportunity committee that initiate gender equality and equal opportunity measures in order to combat all forms of discrimination.

Plans adopted in Finland also state responsibilities for implementation, put on human resources and communications personnel, the rector, deans, faculties, departments, units, professors and supervisors; many plans suggesting that implementation relies upon the whole research or academic community. Primary responsibility for follow-up, nevertheless, falls into the tasks of the gender equality officer or mechanism. The situation depicted for Denmark corresponds to the typology of actors usually valid in research and higher education institutions: main actors are the gender equality boards at the universities, the managers responsible for employment (i.e. deans, heads of department and directors of research centres) and the human resources management department. Overall, timelines do not seem to be systematically fixed. This is also illustrated by the fact that not all GEP analysed for this study had an explicit timeframe.

National researchers reported varying degrees of implementation. Basic measures identified in analysed GEPs are: measures promoting equality in recruitment, appraisal, career management and access to management positions, with a greater or lesser emphasis put on work-life balance and other related issues such as building a gender equality culture or preventing sexist language. Baseline measures also include data collection on gender to improve internal diagnoses, the production of guidelines, terms of references and checklists. In addition, awareness-raising actions are implemented as part of most GEPs, although not necessarily as part of a broader training or capacity-building strategy, which seem to be more standard in those GEPs supported by the EU framework programmes. Where such plans or strategies exist, they primarily mobilise internal or external gender experts and are only exceptionally integrated into the common, on-the-job training scheme of the research and higher education institution. Periodic data collection, where it exists, constitutes a key component of GEP implementation, as it allows to measure change over time and to make gender bias and inequalities visible in the longer term.

Monitoring and evaluation

Monitoring and, to an even greater extent, evaluation are the least covered of institutional transformation stages associated to GEPs in research and higher education institutions, as reported in most Member States. Building proper indicators to follow up on the situation and the expected changes seems to pose problems for many GEPs. Quantitative and, to a lesser extent, qualitative targets, if formally set, are easily perceived by research and higher education institutions' management as a threat if not fulfilled. Even GEPs implemented with the support of an EU-funded project encounter difficulties to validate indicators in order to monitor their action, as this requires time, resources and a long-lasting effort of communication towards human resources management departments and management structures. Since GEPs intend to tackle potential situations of inequality or discrimination, they are likely to manipulate 'hot' data and contentious information that a proper monitoring and evaluation require to communicate and make available to the larger community. Hence, a lack of formalisation of indicators and evaluation mechanisms for a number of GEPs occurs. A favourable legislative framework is not always sufficient: in Italy, the so-called positive action plans (PAPs) are only a formal procedure to comply with the law and are seen as a programmatic tool where positive actions are described and no space is devoted to the monitoring and evaluation of previous PAPs. In Finland, GEPs are rarely properly monitored and evaluated, although the law requires that the plan should contain an evaluation of the previous plan. Monitoring and evaluation activities focus on the gender equality situation of the institution, not on the implementation and effects of the plan. When evaluation is to be carried out, it faces the lack of valid indicators (Koistinen et al., 2015). Similarly, in Sweden there is a lack of information available on the webpages of the research and higher education institutions about how the evaluation and follow-up were done. In Austria, it is reported that universities generally do not perform specific evaluations of the GEP implementation.

GEPs supported by EU framework programmes are placed in a slightly better position. Even if many of the abovementioned obstacles also apply for these plans, their qualification for EU funding nevertheless usually required a robust evaluation framework, often in the form of a dedicated work package. However, when present, these work packages tend to focus on the project's implementation rather than on the GEP's implementation. For this reason, evaluation remains rather formal and does not necessarily appeal to most advanced methodologies such as participatory evaluation. Besides, quantitative indicators set up along the way are not always sufficient and/or do not cover the full GEP. Among most promising practices identified at Member State level (and, therefore, not funded by the EU) for GEP evaluation ranks the first official monitoring/evaluation of the GEPs that will take place in Flemish universities by early 2016. Carried out at the inter-university level, this first exercise shall focus on quantitative indicators on

decision-making and recruitment. The assessment performed in Sweden in 2013-2014 for all GEPs adopted in the country also features as an exception and could remain an isolated initiative even in the Swedish context. It is perhaps in the United Kingdom that the strongest incentives have been given to research and higher education institutions to carry out periodic evaluations of their gender equality policies. Indeed, basic implementation indicators and progress measurement are required to renew Athena SWAN awards, thus contributing to institutionalising a minimum level of evaluation for GEPs. Hence, competition among research and higher education institutions appears to prevent some of them from fixing targets and measuring change, but also, under certain conditions, hinders them from sharing best practices and information with each other for fear of being outperformed in upcoming evaluations.

3.2. Success factors versus risk factors

The analysis of selected GEPs in respective Member States and the background analysis of broader institutional and legislative frameworks, where the integration of gender in research and higher education institutions takes place, provided sufficient insights into identifying key factors of success for the implementation of GEPs. Consecutively, we also point out main factors of risk for the future and effectiveness of these policies.

Key success factors

A comprehensive legal and policy setting, although not constituting a self-sufficient guarantee for effective implementation, undoubtedly provides a more favourable background for setting up and implementing GEPs. Ideally, it legitimises gender and gender equality as matters relevant to society and to research and higher education institutions in particular. This provides not only legal, but also instrumental and discursive resources for equality advocates to take action. This is especially the case in Member States where provisions on GEPs are held in the law, offering a favourable context for their implementation. And even if implementation may vary in terms of intensity between research and higher education institutions and from one Member State to another, the higher number of GEPs to usually be found in these countries contributes to disseminating this type of approach, to creating awareness and to benchmarking. Yet this must be mitigated by the fact that although efforts are made or formal requirements are met, resistance tends to appear. Paradoxically, the mere existence of this legal framework and policy background generates the perception that enough is being done and that no more efforts are needed.

Well-equipped supporting structures: implementing a complex set of measures, collecting and analysing multi-varied data, training staff, raising awareness and building effective instruments all requires human and financial resources. Time dedication and gender expertise are necessary, but not sufficient. Appropriate funding, a clear mandate from top management structures and strong communication with other components of the research and higher education institution are needed to implement effective GEPs. From this point of view, countries where gender mainstreaming has undergone an early institutionalisation, and research and higher education institutions where gender equality is placed high on the agenda, find themselves in better conditions. This is also the case of EU-funded projects, granted with both funds and expertise, although they may also face specific risks. While GEPs' implementation does not require huge funds, some actions (such as childcare facilities, fellowships, chairs with preferential recruitment or wage compensation programmes) require money to be implemented.

Commitment from top management is considered a factor of success for transformative actions in favour of gender equality. Evidence shows, however, that lip-service or purely opportunistic support happens. As reported during the fieldwork, although in certain situations the top management showed a certain degree of commitment for the GEP, its actual implementation was often disrupted in the field. It seemed that the leadership believed that a GEP could be implemented without engagement, efforts or negotiation. Whereas it is extremely difficult to design and start up a GEP in a research and higher education institution without the explicit support from the top leadership, the value of this support is conditioned to the following conditions:

(a) Support must be public and reiterated; ideally, equality discourse of the top management should feature as part of the general profiling of the institution and be reflected wherever this overall discourse is usually communicated (as in appropriate sections of a website, on institutional documentation, in framework contracts with funding authorities, in long-term strategic framework documents ...);

(b) support should serve institutionalisation so that policies and their supporting structures and instruments can survive and further develop after such support has faded away;

(c) support from top management should be used as a strategic resource to secure the engagement of **intermediate management**, among which major resistances are usually identified.

As learnt from the Austrian experience, when there is clear support from senior leaders in relation to the content of the GEP, its legitimacy is increased. For instance, if the rector publicly supports the GEP, the senate's willingness to approve it seems to increase. In addition, public support from senior leaders triggers attention and action from other actors within the organisation instead of perceiving a GEP as additional paperwork.

Community members' engagement: research and higher education institutions are not only places where knowledge is produced. These are also workplaces and communities in which different categories of stakeholders coexist. As inequalities may arise at all levels and in all components of this community, gender equality should also be pursued at all levels. This requires involving community members beyond stakeholders placed in the frontline of GEP implementation. This includes low-intermediate managers, faculty members, human resources management and students in higher education institutions, among others, for which appropriate participation channels and methods are necessary. Pilot experiences lead, notably for GEPs supported through the EU framework programmes, to create a broader engagement through awareness raising, training and communication, which are relevant to that aim.

Existence of leading successful initiatives: although not a pre-condition, the existence of such initiatives provides a strong incentive for research and higher education institutions to take action and to implement GEPs. In the EU, the United Kingdom and Ireland-wide Athena SWAN Charter is currently the most successful of its kind, with over 500 research and higher education institutions awarded, and as many GEPs adopted. As research and higher education institutions are engaged in severe competition for funds, reputation and talents, linking academic excellence with gender equality and equal opportunities encourages them to adopt measures and to provide appropriate resources. Besides, as it stems from this study that most GEPs lack proper monitoring and evaluation mechanisms, applying for awards' renewal entails automaticity in the evaluation of implemented GEPs, granting good performers additional incentives. It was also shown that this initiative encourages other actors, such as RFOs, to actually integrate gender equality performance as part of their operational frameworks. Other initiatives support this, as the German programme that funds female full-professorship, which drew attention to gender equality, or the French Charter for Gender Equality in Higher Education and Research, which urged a number of French universities and grandes écoles to take action and to create a gender policy framework. Especially in Member States where GEPs are scarce, EU-funded projects can act as leading initiatives which help generating and disseminating good practices.

Other enabling factors could be mentioned, although they were supported with less evidence by the national researchers. Incorporating gender equality measures into core management procedures is one of them and can be extended to training activities: in other terms, **institutionalisation is required to ensure sustainability**.

Main risk factors

Several of the risks mentioned in this section mirror the key factors of success identified above: national researchers highlighted the **lack of support from the top leadership** as a major risk, especially when GEPs are at an early stage of their implementation and internal gender equality mechanisms are not sufficiently institutionalised: lack of leadership support undermines the legitimacy of the policy and its relevance to the institution and to the disciplines it represents. It favours status quo and hinders the mobilisation of stakeholders. It also considerably limits the visibility of this policy, both internally and externally, to the research and higher education institution.

The **lack of funding** leads to place the responsibility of the gender equality policy in ill-equipped structures with little or no autonomy. Not only does it prevent the implementation of measures frequently foreseen in GEPs, such as worklife balance schemes or facilities, fellowships and training actions, but also to a certain extent the institutionalisation and sustainability of planned actions. This is of specific relevance as this lack of continuity of gender equality policies in research and higher education institutions is also perceived as a major risk factor: the lack of resources and proper evaluation instruments converge to limit the duration and continuity over time of implemented measures. As a consequence, potential successes are not met and progresses are hardly measured, while capacities and knowledge get lost. It has been highlighted by literature (for example Verloo, 2007) that due to their contentious nature and to the fact that there is no fixed meaning to such a thing as 'gender equality', gender equality policies were especially subject to disruption and required more time to achieve full institutionalisation. In various countries such as Denmark, Spain or Finland, the lack of commitment with gender equality at the political level created less appropriate conditions for mainstreaming gender in research and higher education institutions. The context of economic and budgetary crisis was also widely mentioned by national researchers, as it decreases available resources, places gender equality lower on the agenda, and eventually jeopardises the sustainability of gender equality policies in research and higher education institutions.

Within research and higher education institutions, risk factors are also constituted by **resistances at the intermediate level**, which are faced on a daily basis by gender equality advocates. Although these resistances can be moderated by strong support from leadership, they also embody organisational resistances due to long-established procedures and ways of doing things, gender-blind processes, schemes and indicators that structural changes require to challenge, thus triggering resistances. The fieldwork shown that there is often a lack of support from middle management (positions mostly occupied by men) who do not consider the promotion of gender equality a priority. These resistances can also be increased due to a lack of managerial culture, as many research and higher education institutions have entered a new era (of competition, growing formalisation and greater accountability) for which their managers have been poorly prepared.

The gendered character of scientific culture, however, remains one of the main risk factors to be mentioned, as

it constitutes the core challenge posed to gender mainstreaming in research. As it has been shown (Mergaert and Forest, 2015), the gendered structure of knowledge production remains subject to controversy, as it challenges the fundamental premise of scientific neutrality — that science produces observer-independent knowledge of an objective world (Hearn and Husu, 2011). For this very reason, gender bias and gender blindness remain widespread in research. The study indicates that even societies that are more advanced on their way towards gender equality are not immune to the persistence of a male-centred scientific culture, as reported, for instance, in Denmark.

4. Conclusions

4.1. Main lessons learnt

To conclude this review of GEP implementation in research and higher education institutions in the EU-28, the main lessons learnt from the 28 case studies are summarised below.

- Integrating gender equality in research and contributing to gender knowledge production are explicit policy aims in 22 EU Member States (³⁹). Other provisions related to gender-sensitive recruitment and career promotion and to gender balance in decisionmaking in research could be found in 16 Member States (⁴⁰). More binding provisions could be identified in the legislation on research and higher education of 12 Member States. Five Member States (⁴¹) practically do not address any of the EU's objectives for promoting gender equality in research through legal and policy instruments.
- Gender equality action plans are institutionalised in the form of binding legal provisions in only eight Member States (⁴²), where over 95 % of the over 1 500 GEPs currently implemented in research and higher education institutions across the EU are being carried out (see Table 3). Due to much differentiated policy and legislative contexts and to the differences in how research is organised, these GEPs differ in terms of scope, resources and degrees of implementation. Additionally, a comprehensive institutionalisation does not equal effective implementation, as control mechanisms, internal resistances or support are also at stake.
- Although developments in this realm are mainly driven by domestic features, patterns of Europeanisation also exist. They are associated with the broader context of gender mainstreaming implementation (in terms of policy transfer, ways of doing things, methods ...), and with the initiatives of the European institutions to promote gender equality in research, notably through the funding of institutional change projects (see below). More generally, it can be stated that the broader context of the Europeanisation of research offers favourable conditions to the mainstreaming of gender equality.

- Legislative and institutional frameworks, as well as GEPs, mainly pursue Objectives 1 and 2 of the European Commission, namely fostering the participation of women in research activities, promoting equal opportunities for advancement in research careers, and increasing the participation of women in research decision-making. Objective 3, integrating gender issues in research content, is pursued to a much lesser extent and only occasionally through the means of GEPs. However, RFOs are increasingly contributing to the latter objective, and innovative actions have been designed and implemented as part of EU-funded institutional change projects.
- An ample majority of GEPs do not rely upon a thorough assessment of the prior situation with respect to gender equality and lack proper monitoring and evaluation mechanisms. Planned measures are only seldom financed and supporting structures in charge of their drafting and follow-up usually do not enjoy the necessary resources for these tasks. Moreover, top management structures of research and higher education institutions are rarely associated to the drafting process and not always mobilised to formally endorse these documents, which are not always made public.
- Partner organisations in projects supported through EU framework programmes do not necessarily draft and operate a GEP of their own. The common objective they pursue is to contribute to drawing innovative and effective measures, to generate knowledge on gender in research and higher education institutions, and to support gender equality policies in implementing organisations. As such, these projects may also develop part of a GEP, enhance an existing plan or merge a GEP of their own with a broader initiative at the level of the research and higher education institution. Other EUfunded projects focusing on identifying and analysing best practices and are not directly connected to the implementation of a GEP (e.g. PRAGES, Gendera, Gender-Net) were not considered for this study. This being clarified, it remains that institutional change projects funded by the European Commission embrace a usually broader range of issues, intend to tackle institutional

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^{(&}lt;sup>39</sup>) BE, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LT, LU, HU, AT, PT, SI, SK, FI, SE and UK.

⁽⁴⁰⁾ BE, CZ, DK, DE, EE, ES, FR, HR, IT, LT, HU, AT, SI, SK, FI and SE.

^{(&}lt;sup>41</sup>) BG, LV, MT, NL and RO (excluding initiatives promoted by RFOs).

^{(&}lt;sup>42</sup>) DE, ES, IT, HU, AT, FI, SE and UK.

practices and processes, generate more data about gender in research and higher education institutions than 'standard' GEPs, set up monitoring and evaluation mechanisms, and bring valuable contributions in the form of guidelines, toolkits, training concepts, etc.

Finally, it can be added that out of the scope of formal policies, initiatives (such as Athena SWAN) that make use of the context of intense competition — that nowadays characterises the ERA — have the potential to generate positive effects on the integration of gender in research, at least in the contexts where research and higher education institutions are fully engaged in such a competition.

4.2. Way forward

Starting from this point, and with a view to move forward in supporting the integration of gender in academia and research institutions in the EU, it is important to highlight the following issues.

Assessing the effectiveness of institutional changes for gender equality in research and higher education institutions is especially difficult because insufficient attention is paid to the definition and adoption of valid indicators, to the adoption of comprehensive monitoring mechanisms and to the evaluation of the actions carried out as part of GEPs in research and higher education institutions. More work is to be done in this respect, not only at the level of research and higher education institutions, which do not necessarily have the resources for setting up such mechanisms, but also at the level of research governance and evaluation organisations. The present study can contribute to supporting research and higher education institutions in this endeavour. At this stage, the very issue of what 'effectiveness' actually means when integrating gender equality in research remains unsolved. The response to this issue should in any case address differences in policy, legal and institutional contexts of public research activities in Europe, as they largely determine what makes a gender equality policy effective.

Also related to the challenges posed by such diversity is the question of the transferability of measures considered to be effective in different legal, disciplinary and institutional settings. This question can be addressed from the perspective of policy transfer, which describes 'a process in which knowledge about policies, administrative arrangements, institutions and ideas in one political setting (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political setting' (Dolowitz and Marsh, 2000). Literature on policy transfers, in particular in the field of gender equality policies, can bring useful insights for analysing more closely which are the conditions for a practice or policy measure (or an element of it) to be transferred in another context. To date, this question has largely remained under-addressed in the case of integrating gender equality in academia and research institutions, due to the fact that all organisations primarily focus on their own environments. Transferability is a notion that is of concern to the promoters of gender equality at a higher level than the institutions. Therefore, more work and focus deserves to be placed here for making the best of already gained experiences.

This is also to be linked to the fact that experiences that have been built up have been running, to some extent, 'in isolation', as research and higher education institutions target their own settings (while not giving external visibility to their initiatives). Exceptionally, the EU-funded institutional change projects have been promoting their achievements and tools (through their websites and events) and benefiting from an exchange of experiences within their consortia and among projects running at the same time. Despite the recent existence of GenPORT (43) (an online community of practitioners and a gateway to relevant resources), a larger platform for experience exchange, through which the less advanced can learn from the more advanced and also where the more advanced can critically reflect on their experiences, is still missing. As a consequence, there is a lack of wider sharing and a continuation of 'reinventing the wheel'. This paper and EIGE's online tool, 'Gender equality in academia and research' (GEAR), aim to fill in this gap by offering guidance, inspiration and examples. Still, there will remain a gap when it comes to more active and dynamic exchanges along with capacity-building efforts based on concrete cases and experiences and facilitated by experts.

⁽⁴³⁾ http://www.genderportal.eu/



References

Alonso, A. and Forest, M., 'Is gender equality soluble into self-governance? Regionalising and Europeanising gender policies in Spain', *The Europeanisation of gender equality policies*, Palgrave Macmillan, Basingstoke, 2012, pp. 192-213.

Council of the European Union, *Council conclusions on the European Research Area roadmap 2015-2020 — Adoption*, 2015.

Council of the European Union, Council conclusions on advancing gender equality in the European Research Area — Adoption, 2015.

Dolowitz, D. and Marsh, D., 'Learning from abroad: the role of policy transfer in contemporary policymaking', *Governance*, Vol. 13, No. 1, Blackwell Publishers, Oxford, 2000, pp. 5-24.

Erawatch, the European Commission's information platform on European, national and regional research and innovation systems and policies: country pages (last accessed in November 2015; not available anymore; this information can be currently accessed through: https://rio.jrc.ec.europa. eu/en/country-analysis).

European Commission, European Research Area: facts and figures 2014 — Country fiches, 2014.

European Commission, 'Women and science' — Mobilising women to enrich European research, 1999.

European Commission, *Toolkit — Gender in EU-funded research*, 2009.

European Commission, A reinforced European Research Area partnership for excellence and growth, 2012.

European Commission, Report on the application of Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast) {SWD(2013) 512 final}, 2013.

European Commission, Vademecum on gender equality in Horizon 2020, 2014.

European Commission, *Researchers' report 2014 — A selection of good practices*, Deloitte, 2014.

European Commission, *Gender equality policies in public research*, 2014.

European Institute for Gender Equality, national reports from the non-published *Review of the institutional capacity and effective methods, tools and good practices for mainstreaming gender equality in a few selected policy areas within the European Commission, the Member States and Croatia* (EIGE/2012/OPER/25-126A), 2013.

GenPORT, *Analysis of policy environments (D4.1)*, report composed by Lipinsky, A., Ahlzweig, G., Steinweg, N. and Getz, L. in collaboration with the project's consortium, 2015.

Hearn, J. and Husu, L., 'Understanding gender: some implications for science and technology', *Interdisciplinary Science Reviews*, Vol. 36, No. 2, 2011, pp. 103-113.

Lombardo, E. and Forest, M., 'The Europeanisation of gender equality policies: a discursive-sociological approach', *The Europeanisation of gender equality policies*, Palgrave Macmillan, Basingstoke, 2012, pp. 1-27.

Mergaert, L. and Forest, M., 'Incorporating gender and diversity', in Dingwall, R. and McDonnell, M. (eds.), *The SAGE Handbook* of *Research Management*, Sage Publishing, 2015, pp. 124-143.

Richardson, J., *European Union: power and policymaking*, Routledge, London, 2006.

Beveridge, F. and Velluti, S., Gender and the open method of coordination — Perspectives on law, governance, and equality in the EU, Aldershot, England, 2008.

Verloo, M., *Multiple meanings of gender equality: a critical frame analysis of gender policies in Europe*, Central European University Press, Budapest, 2007.



http://eige.europa.eu

