A Research Compendium of Diversity and Inclusion Indices: Gender Equality Index

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Abstract

The Gender Equality Index was developed at the European Institute for Gender Equality to monitor the progress in gender mainstreaming within EU policy areas. This chapter outlines the political, conceptual and technical background in its development. It also positions it within the wider context of the 1995 UN Beijing Conference, and the ensuing release of international measure of gender equality, as well as its interaction with the global measures of inequalities within the Sustainable Development agenda. It then discuss further the structure of the Gender Equality Index, its six domains (work, money, knowledge, time, power and health) and satellites (violence, intersecting inequalities), and the indicators used. We offer a criticism of methodological updates, arguing that recent 'tinkering' is at odds with the aim to offer a measure of gender mainstreaming. Finally, we conclude with examples of applications, an assessment of strengths and weaknesses, as well as some suggestions for future use.

Keywords: EU, gender, index, composite

Introduction

Measuring gender equality is today an integral part to effective policymaking in the EU: the Gender Equality Strategy 2020-25 uses the Gender Equality Index as the first piece of evidence to encourage member states to increase their efforts[1]. Since the first edition in 2013, the Gender Equality Index has tracked and reported progress by providing a comprehensive measure of gender equality, tailored to fit the EU's policy goals. It reveals both progress and setbacks, and explores what can be done better to seize opportunities for change.

Origin and history

The task to develop the Gender Equality Index was entrusted in 2009 to the European Institute for Gender Equality (EIGE). EIGE is a European Union agency dedicated to gender equality which was created by a council resolution adopted in 2006 (European Commission, 2006a). The overall objective of the institute is "*to contribute to and to strengthen the promotion of gender equality and the fight against discrimination based on sex and to raise EU citizens' awareness of gender equality*." The European Gender Equality Index was developed between 2012 and 2013, by a team of gender and statistics experts who worked in close cooperation with the scientific community, the European institutions including Eurostat, as well as civil society (de Bonfils et al., 2013). The work built upon previous efforts by other researchers, notably the work of Plantenga and colleagues (Plantenga et al., 2003, 2009, 2011). The objective was to develop a tool to measure the progress of gender equality in the EU, to give more visibility to areas that need

[1] Member States on average scored 67.4 out of 100 in the Gender Equality Index 2019. A score which has improved by just 5.4 points since 2005.

improvement and ultimately support policy makers to design more effective gender equality measures.

The Gender Equality Index is designed to be user-friendly and to give a clear picture of the state of gender inequalities in the European Union and its Member States, as well as to allow to easily identify where policies are effective or not. It is an instrument to increase accountability and to feed into public debate with evidence based on figures. It helps measure the progress made in reducing gender inequalities throughout the EU Member States, but it is also having an influence on enlarging the criteria used for measuring inequalities more globally. It does not only affect and respond to European social policy but also to the Sustainable Development agenda in which the EU and the UN are the world's leading proponents and defenders. Inequalities in general, but more specifically for Sustainable Development Goal (SDG) 5 (on gender equality) and SDG 10 (on reducing inequality) cannot be measured only by the Gini coefficient based on income with the addition of education and health differences. Adding measures to capture time and power as well as more gender-sensitive measures of work, money, knowledge, health factors but also violence and intersecting inequalities are called for and increasingly used[2].

When work on the index started, in 2012, other gender composite indicators at international level existed, begging the question as to why another index was needed for the context of the EU. This is linked to the special role of the EU in promoting gender equality as well as to the importance of harnessing women's talents for our European Future. It is highly recognised that the EU has so far had a strong leverage effect on gender equality policies in the member states. Reducing the pay

[2] See Eurostat site on sustainable indicators: https://ec.europa.eu/eurostat/web/sdi/indicators

gap has been in the treaties since 1958 and a highly structured EU gender equality policy has developed since, under the combined influence of institutions (the Commission, the European Parliament and Council and the European court of Justice), stakeholders (civil society, employers and trade unions) and inputs from the academic community. It is now a comprehensive policy which underpins a principle of the treaty (article 2 and 3 of the Treaty on the Functioning of the European Union), which touches on all policies of the European Union (commitment to gender mainstreaming (article 8 of the Treaty on the Functioning of the European Union) and is supported by legislation, programs and projects.

The idea of developing an index to measure progress in gender equality in the EU was born in the wake of the 1995 UN Beijing Conference on Women, Peace and Development, which celebrates its 25th anniversary in 2020. The need to benchmark progress under the 12 critical areas of the "Beijing Platform for Action" gave rise to a proliferation of composite indicators on gender equality from a global perspective. Gender equality found its place in a few of the mainstream complementary indicators to the Gross Domestic Product (GDP). The United Nations Development Program (UNDP), which had produced its first Human Development report focusing on women in 1995, introduced two gender equality indices: the Gender-related Development Index (GDI), to show the inequalities between women and men in long and healthy life, knowledge, and a decent standard of living; and the Gender Empowerment Measure (GEM), a measure of inequalities between women's and men's opportunities in a country. Following on from these, instruments to try and capture different measures of gender equality proliferated as it was becoming more obvious that women's participation is an asset for economic and social growth and development. Based on social institutions indicators, the OECD Development Centre created

the Social Institutions and Gender Index (SIGI) with an exclusive focus on social institutions (i.e. Family Code; Physical Integrity; Civil Liberties; Ownership Rights). It later (in 2006) developed the Gender, Institutions and Development Data Base (GID-DB) to analyse obstacles to women's social and economic development, with an array of 60 indicators on gender discrimination in 161 countries. The best publicised of these initiatives to measure gender equality through an index was, from 2006, the World Economic Forum's assessment of the current size of the gender gap which measures the extent to which women have achieved equality with men in five critical areas: economic participation, economic opportunity, political empowerment, educational attainment and health and well-being. Its publication every year in November gains considerable press coverage. In this proliferation of useful indices for tracking progress in gender equality, one should also mention the Swedish Statistical Office, and Norway, which extended the indices at regional and local level.

This is the context in which the decision to create a Gender Equality Index focused on the EU was made, as the existing indices reflected priorities that did not necessarily match all the objectives and goals of the EU gender equality policy. Also, as the EU was integrating a wider set of countries[3], it had become easier for decision-makers to argue the advantages of composite indicators, notably their ability to provide a single figure that reflected progress in a wider range of areas and made comparisons possible, geographically and over time. As a result, in 2003, the European Commission (EC) commissioned a feasibility study from the Utrecht School of Economics and the University of Manchester Institute of Science and Technology (Plantenga et al., 2003) and in 2005, a commitment was made in the 'Roadmap for Gender Equality 2006-10' to

[3] Following the 2004 and 2007 enlargements to include the eastern part of Europe

"define a new composite Gender Equality Index" (European Commission, 2006b). However, it took nearly another decade before the Gender Equality Index was actually developed.

The decision to create a Gender Equality Index not only took a long time, it was not straightforward for EU institutions either. The main objections expressed by decision-makers were of three kinds. The first was political: were the Member States, and particularly some powerful Member States who did not score very well on gender equality classic indicators (labour market participation) ready to take up the challenge of a 'beauty contest'? The second was technical: statisticians in Eurostat have never been in favour of composite indicators which they see as a perversion in their search for accuracy (Saisana, 2016). The third was conceptual: for an index to be successful, conceptual questions and developing a common understanding of gender equality was needed, together with an operationalisation of these definitions into a measurement model.

Ideally, the Gender Equality Index would be published annually to give a constant monitoring of progress and a call on politicians and decision makers to be vigilant. For a variety of reasons, including financial, the periodicity was set at two years and so far, it has been published in 2013, 2015, 2017, 2019. Efforts have been focused on gathering data and analysis of new fields which could not be treated by measuring gender gaps (such as for example violence and intersecting inequalities), while also working on refining the set of indicators and the methodology used.

Methodology

Dimensions of the Gender Equality Index

The Gender Equality Index consists of a complex set of dimensions, relative to other gender-related composite indicators. It is made up of a 'core' structure, supplemented by 'satellite' accounts. In the 'core', there are six domains that cover the most relevant economic and social policy domains in the EU's work on gender equality. These are: work, money, knowledge, time, power and health. The two 'satellite' accounts look at violence – a separate domain that considers women only, and not the situation of both women and men – and intersecting inequalities, as a cross-cutting domain.

The development of these domains is the result of a long consultation process, influenced by political decisions. A first framework and potential domains were first developed by Plantenga and colleagues in 2003 (Plantenga et al., 2003, 2009), but failed to be adopted by the European Commission and was subsequently abandoned. In 2009, when the European Institute for Gender Equality was created, the Gender Equality Index was transferred to their Work Programme (de Bonfils et al., 2013; Hubert & Stratigaki, 2011). This has represented a will for the European Commission to distance itself from potentially sensitive and disputed measures by the EU Members States' governments, civil society representatives and other stakeholders. Initially the Commission insisted that it should be called "the Gender Equality Index of the European Institute for Gender Equality" rather than "the European Gender Equality Index", distancing the institutions from a potentially explosive instrument.

The current framework of the Gender Equality Index was developed at the European Institute for Gender Equality by a team of internal researchers (de Bonfils et al., 2013) and supported by review work undertaken by external contractors (Plantenga et al., 2011), although their original work for the agency was left largely unpublished. The domains adopted were informed by the following process:

- An in-depth review of gender-related literature to understand and map key issues at the macro-level.
- An analysis of key policy frameworks (and their respective domains) such as the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) or the Beijing Platform for Action.
- An examination of the frameworks, approaches and results of other gender-related composite indicators particularly at international level such as the UNDP's Gender Development Index or the World Economic Forum's Global Gender Gap Index.
- A review of the key elements of the successive pluriannual EU gender equality programmes, roadmap, and strategy.
- An extensive stakeholder consultation process with policy-makers, academics and civil society representatives.

Data sources

The data upon which the Gender Equality Index are based are of high quality, since the Index relies on official data sources and other surveys at international level. These sources predominantly include Eurostat, the EU body responsible for the dissemination of harmonised data in its Member States. The data are also obtained from other EU-level surveys such as the European

Working Conditions Survey (EWCS) or the European Quality of Life Survey (EQLS) both conducted by Eurofound, the "European Foundation for the Improvement of Living and Working Conditions" (European Foundation for the Improvement of Living and Working Conditions, 2017, 2018); the European Institute for Gender Equality's own data collection after having taken over the European Commission's Database on Women and Men in Decision-making (European Institute for Gender Equality, 2018); or the EU-wide Survey on Violence against Women (European Union Agency for Fundamental Rights, 2014) conducted by the European Union Agency for Fundamental Rights (FRA). It is important to note here that rather than designing the Gender Equality Index based on existing and available data, a deliberate choice was made to design an instrument with all the necessary domains to measure the state of gender equality, including domains where data were largely insufficient (such as for example on quality of work, gender-based violence against women), and insofar as possible to include an intersectional approach.

During the course of its update, the measurement framework of the Gender Equality Index has been slightly adapted. The current configuration (version released 2019) of the data is given by domain in Table 1. Each of the domains represent a priority area of EU policy on gender equality, outlined in the conceptual framework underpinning the Gender Equality Index (de Bonfils et al., 2013). The first domain – *work* – looks at participation in the labour market, recognising that working hours are gendered since women are more likely to work on a part-time basis. Furthermore, it takes into consideration patterns of segregation with women and men working in different sectors. Finally, it also examines quality of work, to recognise that it is not only more work that policy should aim for, but also better work. The second domain – *money* – examines gender differences in pay and income, since women earn less than men and receive lower

pensions. It also looks at poverty since it affects women to a greater extent. The third domain – *knowledge* – looks at educational attainment, with women now over-represented as third-level graduates. It also looks at segregation since women and men are unequally represented in some subjects such as science or education. Finally, it looks at women's and men's opportunity to equally engage in lifelong learning. The fourth domain – *time* – captures care and work-life balance, by looking at the time spent on activities other than work and related to care or social activities, reflecting women's greater involvement in much of care work whether that is within the household or at community level. The fifth domain – *power* – looks at the representation of women and men in decision-making positions, such as in politics, the economy or social roles such as the media. It considers for example women's under-representation as ministers, in parliaments, on company boards or on scientific boards. The sixth domain – *health* – focuses on gender differences in health outcomes: although women live longer, they get sicker. It also includes determinants of health, to capture men's propensity to engage in more risky-bevahiours such as smoking or drinking. Finally, it measures equal access to health structures, since women are more likely to engage with these as part of their social roles.

Place Table 1 here

Aggregation and weighting methods

The Gender Equality Index consists solely of quantitative indicators. Its scores are the result of its 31 indicators being aggregated within each of the 14 sub-domains, and subsequently across the six core domains (work, money, knowledge, time, power and health).

The calculation relies on two separate measures, one for gender gaps and the other for levels of achievement. Gender gaps provide a measure bound between 0 and 1, where 1 represents parity. It is a symmetric measure in that it considers both inequalities to the detriment of women (e.g. in employment or representation in decision-making positions) or of men (e.g. in educational attainment or life expectancy). Levels of achievement look at the overall situation at the national level. A high level of achievement is a relative measure which compares the highest performance by a country to others in all domains. For example, the measure will compare the employment rate of each EU Member State to that of the highest employment rate across all Member States. These two measures are then combined into a single metric. This is to ensure that the final score reflects not only a small gender gap, but also high levels of achievements. This metric is then rescaled so that it falls on the interval ranging from 1 to 100, where 100 represents greater gender equality (Barbieri et al., 2017; de Bonfils et al., 2013; Humbert et al., 2015). These different steps are exemplified below for ‘duration of working life in years’ for 2017.

Place Table 2 here

The final step is the aggregation, which is calculated using an arithmetic mean at the level of the metrics within each sub-domain, and subsequently using a geometric mean at the higher levels (sub-domains into domains, domains into the overall index). The rationale for this approach is to limit the compensations allowed as illustrated below.

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Equal weights are given to each indicator within each sub-domain and domain. However, the domains are then aggregated using weights derived from consultations with experts so related to a qualitative appreciation of their respective importance, as outlined in Table 4 below.

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Illustration of the results

The Gender Equality Index's most recent results, for the year 2017 in Table 5, show that Nordic countries (Sweden, Denmark, Finland) together with France and the UK achieve the highest scores. However, it is important to emphasise that despite the perception that a country such as Sweden is gender equal, it still only achieves a score of 83.6 which remains some distance from the perfect equality score of 100. There is therefore some significant progress still to be achieved in all countries, with the progress made being described as 'at snail's pace' (Barbieri et al., 2019).

The domain of *health* is where the highest scores are achieved, likely because of the high levels of care afforded to EU residents compared to globally (see for example the comparison of scores with the Global Gender Gap Index in Humbert et al., 2015). The lowest scores across countries are in the domain of *power*, which focus on gender gaps in decision-making positions in the public and private sectors. This also corresponds to the domain of the Gender Equality Index where most progress has been realised, with several countries (France and Italy) achieving increases of over 30 points, mainly driven by the rise in women on company boards due to quota legislation.

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Application

The Gender Equality Index benefits from growing recognition from sources in academic context or through the media. However, its development has been hindered by the institutional context of the European Institute for Gender Equality which has been plagued by handicaps linked to the overall sexist institutional environment as well as allegations of (sexual) harassment and exploitation of its workers, trainees and contractors over the years (Hervey, 2018, 2019). A significant number of cases, relating to harassment and non-recognition of authorship, have been brought against the Institute by former members of staff and contractors. The institution therefore sits uneasily among the academic community, although a change of leadership in 2020 is regarded as the opportunity for the European Institute for Gender Equality to turn a new page.

Despite the strained relationship between the European Institute for Gender Equality and part of the academic community, the Gender Equality Index has been cited in over 100 publications since its launch in 2013. Predominantly, it is used as a benchmarking tool in papers to help assess the lack of progress towards gender equality in an EU context (e.g. Plomien, 2018) or at national level (e.g. Kavoura et al., 2018; Ylöstalo, 2016), but also in more general terms (e.g. Borrell-Porta et al., 2019). Other articles use the Gender Equality Index, not for the scores it produces, but for the conceptual framework of gender equality it is based upon (e.g. Bretherton et al., 2016). This typically involves using it as a reference for discussing issues such as gender gaps in employment, pay or time-use.

A number of papers have used the Gender Equality Index as part of their analysis in various subject areas. For example in the social sciences, Nevala (2017) uses the Gender Equality Index to show that coercive control, as a form of violence against women, is positively correlated to levels of gender equality in the EU. This builds upon earlier findings from the EU-wide survey on Violence against Women which found a positive relationship between gender equality levels – as measured by the Gender Equality Index – and levels of physical/sexual violence against women (European Union Agency for Fundamental Rights, 2014). This phenomenon, which sees higher disclosed levels of violence against women in the most gender equal countries in the EU (i.e. Sweden, Finland, Denmark, the Netherlands) has been termed the 'Nordic Paradox' (Gracia & Merlo, 2016). Researchers have now incorporated the scores of the Gender Equality Index into the models themselves, allowing them to assess the effects of levels of gender equality together with other factors (Humbert et al., 2019). Other studies have modelled how the Gender Equality Index could be used as a predictive factors for gender representation in information and communication

technology (Colomo-Palacios & Casado-Lumbreras, 2019). The methodology used by the Gender Equality Index, such as the use of levels and not only gender gaps (Permanyer, 2015), has been discussed in a number of papers. Its methodology has also been expanded to other contexts, such as measuring gender equality at the sub-national level in Italy (di Bella et al., 2018), in countries other than the EU Member States as in the case of Serbia (Babović, 2016), or in settings such as universities (Mignoli et al., 2018).

Within the media, particularly national media sources, the visibility of the Gender Equality Index is rather poor. This is particularly striking when comparing the media coverage typically associated with the World Economic Forum's yearly release of its Global Gender Gap Index. For example, a google news search of the terms 'EIGE' and 'Gender Equality Index' only yields fewer than 500 articles. In contrast, a similar search for the World Economic Forum's Global Gender Gap Index produces nearly 50,000 results, showing the lost potential for the Gender Equality Index to have impact through the media.

Strengths and Weaknesses

Strengths

A key strength of the Gender Equality Index is that it is the most comprehensive composite measure available for gender equality specifically in the context of the EU policy framework. It is unique on the one hand by its close connection to policy-making[4] and on the other hand its breadth

[4] The Index is quoted in the new EU Gender Equality Strategy 2020-2025 but it is one of the measures used in the EU annual report published in March every year. Having a yearly edition of the Index will enhance this use. It has progressively become one of the measuring tool for social progress within the larger EU policy making context (for example for making country specific recommendations after the European Semester)

as, unlike other more global composite indicators, it is able to leverage the range of data available in the EU statistical system and that of other sources such as EU agencies (Humbert et al., 2015).

The computation of the Gender Equality Index is unlike other gender-related composite indicators built at international level in that, since its conception, it has considered two fundamental aspects of gender mainstreaming. First, the Gender Equality Index considers the relative position of women and men to each other. This means comparing how the two groups fare, relative to each other, considering gender gaps equally regardless of whether they are to the advantage of women or of men. Second, the Gender Equality Index does not consider these gender gaps in isolation. This is one of the features that makes this tool unique and particularly apt at measuring the progress of gender equality within a policy context. This is because it is too limited to consider gender gap without also understanding the levels of achievements associated with these gaps. To illustrate this key idea, let us consider how after the financial crisis of the late 2000s, employment rates decreased for both women and men, but more sharply for men. This pattern was termed a 'levelling down', and the outcomes a 'he-cession' (Cirillo et al., 2016). In summary, this means that the Gender Equality Index is able to measure situations where a small gender gap might exist, but to differentiate where that is associated with either a detrimental or positive situation for women and men. This is akin to saying that a small gap should not result in a good score where women and men are treated equally badly.

The Gender Equality Index also provides a platform for analysis of different situations in each of its six core domains. When looking at *knowledge*, the high achievements in education of women compared to men has been striking in the last 25 years, nevertheless, these advances are

mitigated by their low scores in STEM (Science, Technology, Engineering, Mathematics) education. As for the domain of *power*, the index relies on the most comprehensive and regularly updated database created by the European Commission in the late 90s and currently managed by EIGE[5]. In a field (whether political or economic) where figures change with every election and management or board decision, this is particularly unique. *Work* is a particularly subtle domain to measure, as the participation of women and men in the labour market has to be weighted against their caring responsibilities and the effects of stereotypes, segregation and the quality of work. The reason why *time* had never before been used as an indicator to measure the effect of policies on people's lives is twofold: on the one hand, caring activities have been mainly outside the market (this is changing slowly) while on the other hand, any statistician would know that time-use surveys are expensive and long. Hence the originality (strength) of the Gender Equality Index which included time-use indicators which has been revealed to be particularly useful as EU gender equality policy was focusing on work life balance[6]. Lastly, the choice to add the two unchartered domains of violence and intersecting inequalities was led by the concern to create the architecture of a holistic index, integrating what is now a major issue of concern and policy action: the measure of gender-based violence and of multiple discrimination.

Place Table 6 here

[5] https://eige.europa.eu/gender-statistics/dgs/browse/wmidm

[6] Following the withdrawal of the Maternity Leave Directive, the European Commission decided to take a broader approach in addressing women's under-representation in the labour market. One of the deliverables of the European Pillar of Social Rights is the Work-life Balance Initiative, which addresses the work-life balance challenges faced by working parents and carers.

Weaknesses

A notable weakness of the Gender Equality Index is the methodological changes that have been made since it was first launched in 2013. These changes have been documented in a technical methodological report (Barbieri et al., 2017), however, in practice there is little transparency with stakeholders as to the nature of these changes and their implications for how gender equality is measured in the EU policy framework. These changes are not without consequences for the scores of the Gender Equality Index, with for example an EU score of 52.9 for 2012 in the 2015 version but 65 for the same year in the 2019 version.

This change in methodology has been a response to methodological criticisms which showed that the scores were disproportionately driven by differences across countries rather than gender gaps per se (Permanyer, 2015). This means that currently, the Gender Equality Index reflects inequalities across countries (e.g. in relation to level of employment, number of healthy life years or education attainment), with gender gaps in these areas having less influence on the scores. The methodological update has therefore attempted to address this by artificially deflating the differences between countries, so as to give more weight to differences between women and men. However, this change is not without its problems, in that it ignores the core aim of gender mainstreaming: increasing levels of achievements while ensuring that situations are improved for both women and men. It is important to pay attention to levels, as this means paying attention to the gendered nature of policy areas rather than simply gender gaps. For example, an analysis of poverty cannot be conducted without considering that the focus is both on poverty alleviation combined with reduced gender gaps (Villa & Smith, 2010). That differences across countries are,

on the whole, larger than gender gaps is a structural feature rather than a methodological weakness in how the Gender Equality Index was devised. The current calculation has opted to resort to what can be called a 'tinkering strategy': artificially reducing differences across countries (by taking the square root of differences between countries) to give more importance to gender gaps. While this, at first glance appears sensible, it fails to consider what would happen if in the future the social and economic structure across EU countries were to be drastically different. Let us imagine that the convergence agenda was successful within the next 10 years, would it then be envisaged to arbitrarily amend the importance of each component again? And with what implications for the actions and responses devised over the years on the basis of this evidence? And how to explain and communicate these differences, particularly among stakeholders without a high level of statistical or econometric expertise?

Future research

Greater transparency is needed around the methodological changes that have been made to the Gender Equality Index, particularly for the benefit of all stakeholders that do not have extensive statistical or econometric expertise. At the very least, the 'correction of the correction' when it comes to levels of achievements should be abandoned, as it amounts to methodological tinkering, and is fundamentally detrimental to the principle of gender mainstreaming at the heart of gender equality policy in the context of the EU.

Greater engagement of the European Institute for Gender Equality with scholars in how it can be used in further analysis is also recommended. Currently, the agency has a weak relationship with the larger community of academics. This is in part due to prioritising the needs to individual

EU countries (e.g. by producing country-specific sheets for each country) but also by failing to properly recognise authorship as required by academic practice and ethics. The autonomy of the European Institute for Gender Equality, which was engrained in its conception[7] is in this way closely linked with the future development of the Gender Equality Index and its scientific legitimacy. As the institute has been celebrating its 10 years of existence, one would now expect that infancy diseases (in particular over-dependence on its political masters) can be overcome, allowing for a new balance between political expressions and academic rigour to best serve policy needs.

Conclusion

Starting in 2019, the Gender Equality Index will be released every year which will mark a great improvement for the monitoring of policies. Each update will be accompanied by a selected focus which will support the actual mainstreaming of gender equality in different policy fields. In 2019 and 2020, these are 'work-life balance' and 'the effect of technology on the workplace' respectively. While these themes are important in their own right, their connection with a composite indicator such as the Gender Equality Index needs robust theoretical elaboration by statisticians and gender experts in the field as not to blur the main messages that such an Index should bring. This is a new challenge for EIGE and the Gender Equality Index, with at its core the aim to become a key instrument to monitor the progress made to mainstream gender in all areas of EU policy and serve as a beacon for international commitments for gender equality.

[7] https://www.europarl.europa.eu/meetdocs/committees/femm/20040406/en.pdf

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Table 1

Structure and indicators used in the Gender Equality Index (version released 2019)

Domain	Sub-domain	Indicator	Source	Year
Work	Participation	Full-time equivalent employment rate (%, 15+ population)	Eurostat, EU LFS	2017
		Duration of working life (years, 15+ population)	Eurostat, EU LFS	2017
	Segregation and quality of work	Employed people in Education, Human Health and Social Work activities (%, 15+ employed)	Eurostat, EU LFS	2017
		Ability to take an hour or two off during working hours to take care of personal or family matters (%, 15+ workers)	Eurofound, EWCS	2015
		Career Prospects Index (points, 0-100)	Eurofound, EWCS	2015
Money	Financial resources	Mean monthly earnings (PPS, working population)	Eurostat, SES	2014
		Mean equivalised net income (PPS, 16+ population)	Eurostat, EU SILC	2017 EU-28: Non-weighted average
	Economic situation	Not-at-risk-of-poverty, ≥60% of median income (%, 16+ population)	Eurostat, EU SILC	2017
		S20/S80 income quintile share (16+ population)	Eurostat, EU SILC	2017
Knowledge	Attainment and participation	Graduates of tertiary education (%, 15+ population)	Eurostat, EU LFS	2017
		People participating in formal or non-formal education and training (%, 15+ population)	Eurostat, EU LFS	2017
	Segregation	Tertiary students in the fields of Education, Health and Welfare, Humanities and Art (tertiary students) (%, 15+ population)	Eurostat, Education statistics	2017
Time	Care activities	People caring for and educating their children or grandchildren, elderly or people with disabilities, every day (%, 18+ population)	Eurofound, EQLS	2016
			Eurofound, EQLS	2016

		People doing cooking and/or housework, every day (%, 18+ population)		
	Social activities	Workers doing sporting, cultural or leisure activities outside of their home, at least daily or several times a week (%, 15+ workers)	Eurofound, EWCS	2015
		Workers involved in voluntary or charitable activities, at least once a month (%, 15+ workers)	Eurofound, EWCS	2015
Power	Political	Share of ministers (% W, M)	EIGE, Gender Statistics Database, WMID	2016-2017-2018
		Share of members of parliament (% W, M)	EIGE, Gender Statistics Database, WMID	2016-2017-2018
		Share of members of regional assemblies (% W, M)	EIGE, Gender Statistics Database, WMID	Regional assembly 2016-2017-2018 Local level politics 2017
	Economic	Share of members of boards in largest quoted companies, supervisory board or board of directors (% W, M)	EIGE, Gender Statistics Database, WMID	2016-2017-2018
		Share of board members of central bank (% W, M)	EIGE, Gender Statistics Database, WMID	2016-2017-2018
	Social	Share of board members of research funding organisations (% W, M)	EIGE, Gender Statistics Database, WMID	2017-2018 IT: 2017
		Share of board members in publicly owned broadcasting organisations (% W, M)	EIGE, Gender Statistics Database, WMID	2016-2017-2018
		Share of members of highest decision-making body of the national Olympic sport organisations (% W, M)	EIGE, Gender Statistics Database, WMID	2015-2018
Health	Status	Self-perceived health, good or very good (%, 16+ population)	Eurostat, EU SILC	2017
		Life expectancy in absolute value at birth (years)	Eurostat, Mortality data	2016 Total: average of women and men
		Healthy life years in absolute value at birth (years)	Eurostat, EU SILC and mortality data	2016 Total: average of women and men
	Behaviour	People who don't smoke and are not involved in harmful drinking (%, 16+ population)	Eurostat, EHIS	2014 EU-28: Non-weighted average

				FR, NL: EIGE estimation
		People doing physical activities and/or consuming fruits and vegetables (%, 16+ population)	Eurostat, EHIS	2014 EU-28: Non-weighted average BE, NL: EIGE estimation
	Access	Population without unmet needs for medical examination (%, 16+ population)	Eurostat, EU SILC	2017
		People without unmet needs for dental examination (%, 16+ population)	Eurostat, EU SILC	2017

Source: Barbieri et al., (2019)

Table 2

Metrics and scores for 'duration of working life in years' for 2017

	Men	Women	Total	Gender gap metric	Level of achievement metric	Score
Austria	39.2	35.0	37.2	0.94	0.94	89.0
Belgium	35.0	30.7	32.9	0.93	0.89	83.1
Bulgaria	34.4	31.6	33.0	0.96	0.89	85.3
Cyprus	39.1	33.5	36.3	0.92	0.93	86.2
Czech Republic	38.9	32.8	35.9	0.91	0.93	84.9
Germany	40.3	36.3	38.4	0.95	0.96	90.8
Denmark	41.2	38.0	39.6	0.96	0.97	93.6
Estonia	39.4	37.5	38.5	0.97	0.96	93.7
Greece	36.0	29.2	32.7	0.89	0.89	79.3
Spain	37.2	32.8	35.1	0.93	0.92	85.9
European Union	38.3	33.4	35.9	0.93	0.93	86.5
Finland	38.7	37.4	38.0	0.98	0.95	94.0
France	36.9	33.3	35.2	0.95	0.92	87.0
Croatia	34.5	30.4	32.5	0.94	0.88	82.8
Hungary	36.4	30.9	33.7	0.92	0.90	82.6
Ireland	40.1	33.1	36.7	0.90	0.94	84.8
Italy	36.2	26.8	31.6	0.85	0.87	74.1
Lithuania	35.4	36.3	35.9	0.99	0.93	91.8
Luxembourg	35.1	31.3	33.2	0.94	0.89	84.3
Latvia	36.2	36.2	36.2	1.00	0.93	93.2
Malta	39.9	27.9	34.1	0.82	0.90	74.2
Netherlands	42.5	37.6	40.1	0.94	0.98	92.0
Poland	36.0	30.4	33.3	0.91	0.89	81.8
Portugal	39.2	36.0	33.4	0.92	0.89	82.7
Romania	36.4	30.1	33.4	0.90	0.89	80.8
Sweden	42.6	40.7	41.7	0.98	1.00	97.6
Slovenia	36.6	34.5	35.6	0.97	0.92	89.6
Slovakia	36.4	31.6	34.1	0.93	0.90	84.0
United Kingdom	41.2	36.4	38.9	0.94	0.97	90.5

Source: own calculations.

Note: the maximum value is taken for a single year in this example, unlike the methodology which considers the maximum across all years considered in the calculation.

Table 3

Summary of aggregation methods and associated compensations

Indicator 1	Indicator 2	Indicator 3	Arithmetic	Geometric	Harmonic
			$\frac{\sum_{i=1}^{n} x_i}{n}$	$\left(\prod_{i=1}^{n} x_i\right)^{1/n}$	$\left(\frac{\sum_{i=1}^{n} x_i^{-1}}{n}\right)^{-1}$
			Full compensation	Medium compensation	Limited compensation
50	50	50	50	50	50
40	50	60	50	49.3	48.6
10	50	90	50	35.6	22.9

Source: own calculations.

Table 4

Weights used for the aggregation of the domains of the Gender Equality Index

Domain	Work	Money	Knowledge	Time	Power	Health
Weight	0.19	0.15	0.22	0.15	0.19	0.10

Source: de Bonfils et al., (2013)

Table 5

Scores (2017) and differences (2005-2017) of the Gender Equality Index by domain and country

	Index	Work	Money	Knowledge	Time	Power	Health	Index	Work	Money	Knowledge	Time	Power	Health
EU	67.4	72	80.4	63.5	65.7	51.9	88.1	5.4	2	6.5	2.7	-1	13	2.2
BE	71.1	74.1	88.3	71.3	65.3	55.2	86.3	5.1	3.1	7	3.2	-9	15.4	0
BG	58.8	69	61.8	53.2	42.7	59.9	77.1	2.8	1.7	7.5	0.7	-8.2	11.5	4.5
CZ	55.7	67	76.7	59	57.3	26.1	86.3	2.1	1.7	6.5	6.8	6.1	-3.5	1.7
DK	77.5	79.6	87.1	72.3	83.1	64.9	89.9	2.9	0.7	4.4	-1.4	0.4	10.2	-1.2
DE	66.9	72.1	86	53.7	65	56.6	90.5	6.9	4	2.7	-1.6	-1.6	22.6	3.9
EE	59.8	71.5	69.4	55.5	74.7	34.6	81.9	7.6	0.5	11	6	0.1	12.1	0.9
IE	71.3	75.5	85.5	66.9	74.2	53.4	90.9	9.4	4.4	6	6.1	0	21.3	0.5
EL	51.2	64.2	71.4	55.7	44.7	24.3	83.5	4.4	1.7	-0.5	8.5	-1.5	6.1	-1.1
ES	70.1	72.9	76.7	67.4	64	62	90.1	7.9	4.8	3.1	8.1	6	16.1	2
FR	74.6	72.4	86.4	66	67.3	78.3	87.4	9.4	1.9	4.8	3.7	-1.8	34.7	0.5
HR	55.6	69.2	72.2	50.4	51	34.8	83.7	5.3	1.7	3.6	6.8	2.7	7.4	2.3
IT	63	63.1	78.8	61.2	59.3	47.6	88.7	13.8	2.3	2.6	7.1	-0.8	31.5	2.9
CY	56.3	70.7	80.8	56.5	51.3	28.2	88.4	10.4	4.4	8.2	13.1	3.6	11.8	2.6
LV	59.7	74.2	65.5	49.7	65.8	44.1	78.3	6.3	2.5	9.2	3.1	6.7	9.3	4.5
LT	55.5	73.6	64.7	55.9	50.6	32.5	79.8	-0.3	1.7	7.7	0.8	-2.9	-4.8	2.2
LU	69.2	74.1	91.8	69.5	69.1	44.8	89.6	4.8	6	-1.3	7.5	-4.1	8.6	0.4
HU	51.9	67.4	71.6	56.9	54.3	20.6	86.6	2.4	2	5.1	0	-6.8	4.3	4.2
MT	62.5	73.3	82.5	65.8	64.2	32.2	92.1	6.5	12.5	12.2	3.4	3.4	4.4	1.4
NL	72.1	77.4	86.7	67.1	83.9	50	90	4.3	2.6	4.5	3.2	-2.5	9.7	0.3
AT	65.3	76.6	86.4	64.1	61.2	39.9	91.7	5.8	2.9	3.9	5.2	1	10.4	0.3
PL	55.2	67	75.1	56.5	52.5	29.1	83.2	2.8	1.8	13.7	-0.2	-2.1	2.8	2.6
PT	59.9	72.5	72.1	55.1	47.5	46.7	84.5	10	1.9	3.3	6.5	0.2	24.5	0.7
RO	54.5	67.7	62	51.5	50.3	38.8	71.1	4.6	-0.9	8.8	3.6	1.4	8.1	1.6
SI	68.3	73.3	82.4	56	72.9	57.6	87.1	7.5	2.1	4.7	3.9	-0.5	21.1	0.8
SK	54.1	66.5	74.2	60.4	46.3	26.8	85.8	1.6	1.2	12.7	5.9	-9	-0.1	2.3
FI	73.4	74.9	87.6	61.1	77.4	66.7	89.7	1.4	0.7	7.5	4.5	-4.2	-1.7	0.5
SE	83.6	83	86.8	73.8	90.1	83.4	94.7	4.8	4.3	2.7	5.7	0.5	9.3	3
UK	72.2	76.9	81.6	70.4	69.9	56.5	93.3	1	2.7	1.9	-5.4	0.5	5.1	0.2

Source: Barbieri et al., 2019

Note: The data for **2019 Index** is from **2017**

Table 6

Illustration of the effects of different levels of achievements for 'duration of working life in years' in 2017

Sex	Men	Women	Total	Gender gap	Gender gap metric	Level of achievement metric	Score
Sweden	42.6	40.7	41.7	-1.9	0.98	1.00	97.6
Country A	35.9	34.0	35.0	-1.9	0.97	0.92	89.1
Country B	30.9	29.0	30.0	-1.9	0.97	0.85	82.2
Country C	25.9	24.0	25.0	-1.9	0.96	0.77	74.6
Country D	20.9	19.0	20.0	-1.9	0.95	0.69	66.1
Country E	15.9	14.0	15.0	-1.9	0.93	0.60	56.4
Country F	10.9	9.0	10.0	-1.9	0.90	0.49	44.6
Country G	5.9	4.0	5.0	-1.9	0.80	0.35	28.4

Source: own calculations, based on hypothetical data (except Sweden).