

Article

# Gender Equality in Europe and the Effect of Work-Family Balance Policies on Gender-Role Attitudes

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**Abstract:** This study starts from the assumption that the context of opportunities for work-family balance affects individual attitudes toward gender roles, a main indicator of support for gender equality. Compared with extant research, the present study adopts a more articulated definition of “opportunity structure” that includes national income level and social norms on gender attitudes, measures of gender-mainstreaming policies implemented at the company level (flexitime), and different work-family balance policies in support of the dual-earner/dual-caregiver family model (e.g., parental-leave schemes and childcare provisions). The effects of these factors are estimated by performing a cross-sectional multilevel analysis for the year 2014. Gender-role attitudes and micro-level controls are taken from the Eurobarometer for all 28 European Union (EU) members, while macro-indicators stem from Eurostat, European Quality of Work Survey, and the Organisation for Economic Cooperation and Development (OECD). Our results show that both institutional and workplace arrangements supporting the dual-earner/dual-caregiver family model are associated with more egalitarian gender-role attitudes. This is particularly true concerning availability of formal childcare for 0- to 3-year-olds among institutional factors, as well as work-schedule flexibility among workplace factors, probably as they enable a combination of care and paid work for both men and women.

**Keywords:** gender equality; work-family balance; gender-role attitudes; childcare; working time; multilevel analysis

## 1. Introduction

Gender equality is a multidimensional concept that covers all spheres of our social experience (Aboim 2010; Grunow et al. 2018; Wharton 2005). However, for a long time the issue of gender equality has been framed only around women’s participation in the labour market (Gornick and Meyers 2008; Orloff 1993), neglecting the fact that gender equality not only concerns women, and that gender inequalities affect far more dimensions than just labour-market participation (Aboim 2010; Lewis 2001). Eventually, the conceptualisation of gender equality broadened to reflect its multidimensionality, the differentiated progress in the public and private spheres, and the necessity of also considering social restrictions placed on men as fathers, as well as gender relations (Fraser 1994; Grunow et al. 2018; Lewis 2001; Pascall and Lewis 2004). The long struggle of women’s and feminist movements, as well as influences from general policy-led processes called “gender mainstreaming” (spearheaded by the EU), contributed to this conceptual evolution (Crespi and Lomazzi 2018). Since 1996, the EU has embraced

the gender mainstreaming perspective with the creation of a culture of equal opportunities being one of its principal goals toward building a fairer society, implementing it in all policy realms and passed the concept down to the Member States' policy level (Lombardo and Meier 2008; Moser and Moser 2005; Rees 1998).

Among gender equality indicators, the domain of work-family balance always has been a crucial one (Caracciolo di Torella and Masselot 2010; Crespi and Lomazzi 2018; Rees 1998). Balancing professional duties and family responsibilities is a relevant issue for men and women, who must combine the needs of taking care of family members with the necessity of paid work. When couples define their arrangements to balance such differing responsibilities, many elements come into play, including availability of resources and personal preferences, cultural context, and the institutional setting for opportunities that contribute to establishing individual work-life balance strategies and, more generally, the gender contract<sup>1</sup> between partners (Becker 1981; Geist and Cohen 2011). In particular, partners' gender ideologies, which are normative beliefs concerning roles that are perceived to be proper for women and men<sup>2</sup>, are a key factor for the intra-household division of tasks. For this reason, attitudes toward gender roles can be considered to be an indicator of individual support for gender equality (Bergh 2006).

Following this perspective, in our analysis we conceptualise gender equality in terms of attitudes toward gendered specialisation of roles and tasks. According to this conceptualisation, egalitarian views do not support specialisation of roles and separation of spheres by gender, with women devoted to the private sphere and men to the public one. In the past, gender role attitudes have been taken into account under several perspectives. Alongside studies focusing on the quality of the measurements adopted in famous cross-national surveys (Braun 1998, 2008; Constantin and Voicu 2015; Lomazzi 2017a, 2018; Walter 2017), scholars mainly investigated the change in gender role attitudes over time (Kraaykamp 2012; Lomazzi 2017b; Lee et al. 2007; Scott and Braun 2009; Valentova 2013). Comparisons between countries have often been limited to a small number of countries (Motiejunaite and Kravchenko 2008; Scott et al. 1996) or to descriptive goals, for example aiming at identifying ideology profiles (Grunow et al. 2018; Knight and Brinton 2017). So far, very few studies aimed at explaining the contribution of contextual factors on gender role attitudes while considering a large number of countries, yet the societal context transmits both prevailing cultural values (Schwartz 2006) and forms the opportunity structures within which people are socialised, also concerning their gender norms.

European member states differ by their socio-historical development and national policies. As depicted through composite international indexes (e.g., the EIGE Gender Equality Index (EIGE 2017a)), gender equality has not been reached to the same extent in all European countries, and not all dimensions of gender equality are developing at the same pace. The outlook and approach of family policies however have been rapidly changing throughout the last decades in most, but not all, European countries. These changes were mostly driven by demographic concerns about ageing and low fertility rates and the linked problem of sustaining social security, and to a lesser extent by a change in gender ideology (OECD 2005; Lewis et al. 2008; Fagnani 2012). Have these new national family policies been influencing the public attitude towards gender roles? Are current institutional variations able to explain different levels of gender equality ideas throughout Europe? While in general, public attitudes are regarded as more resistant to changing contexts than behaviours—as they are formed by early socialisation, group identification, and values—the political setting of work-family balance policies is considered particularly relevant for explaining gender role attitudes (Sjöberg 2004; Kangas and Rostgaard 2007; André et al. 2013; Grunow et al. 2018). Although some studies following these

<sup>1</sup> With the term "gender contract" scholars as Pfau-Effinger (1994) and Olsson (2012) refer to the household arrangements concerning the gendered division of paid and unpaid work within the couple.

<sup>2</sup> Gender ideologies can also be conceived of as the individual level of support for the separation and specialisation of tasks by gender (Becker 1981; Geist and Cohen 2011).

family policy changes found low indications of change in the work-family life and a persistence of traditional, cultural patterns (Abrahamson 2007), more recent studies saw changes in female labour market behaviour and an important change in attitudes towards female employment (e.g., for the case of Germany, see OECD 2017<sup>3</sup>).

This study focuses on the role played by the opportunity structure in explaining individual gender role attitudes, with a specific focus on work-family balance policies. Following the policy feedback theory, which stipulates that public policies can shape not only elite but also public attitudes (Campbell 2012; Gangl and Ziegle 2015; Grunow et al. 2018), we expect to find an effect of the current institutional contexts on gender attitudes of currently working aged persons, whose lived experience (Campbell 2012) is directly affected. Taking an institutional perspective on gender attitudes is relevant not only because policies create the conditions for people's opportunities, but also because they transmit a specific idea of family models and gendered roles through the norms and practices which they encourage. They contribute in setting a "cultural frame" (Knight and Brinton 2017, p. 1492) and influencing "beliefs about what is possible, desirable, and normal" (Soss and Schram 2007, p. 113). Regardless of implicit or explicit gender-normative framing, policies are thus supporting different family patterns and, therefore, different values concerning gender roles, which are likely to actively or passively affect individuals' perspectives. Following this reasoning, we argue that when gender-mainstreaming work-family policies are implemented at the national level, they can change opportunities wherein working-aged people can pursue their preferences, promoting egalitarian attitudes.

We adopt a multilevel approach using survey data from the 2014 Eurobarometer for all 28 EU members and focus on the effects of work arrangements, including measures of gender-mainstreaming policies implemented at the company level (e.g., flexitime) and different work-family balance policies in support of the dual-earner/dual-caregiver family model (e.g., parental-leave schemes and childcare provisions) on shifting the structure of gender relations within countries. Our findings show that both institutional and workplace arrangements supporting the dual-earner/dual-caregiver family model are associated with more egalitarian gender roles, enabling combinations of care and paid work for both men and women. Because a cross-sectional study design is adopted, no final claims about the causality of the process from policies to gender beliefs can be made<sup>4</sup>. Given the proven policy feedback effect and the top-down transmission of gender mainstreaming from European to national policy fields, the described direction of effect seems to be explaining more of the story than the alternative account of popular demands for family policy changes.

In the following section, we will portray how the EU has embraced gender equality, with a specific focus on the gender-mainstreaming strategy which inspired national policies and practices in the field of work-family balance. We then will look at the current gender-equality landscape in Europe and focus on gauging gender-role attitudes as a proxy for Europeans' support for gender equality. After presenting our approach and our analysis, we will provide results and a discussion.

## 2. Gender Equality and Work-Family Policies in Europe

Concern over gender equality has existed in Europe since the European Economic Community's creation in 1957. Article 119 of the Treaty of Rome, which referred to women's right to equal pay with men, first introduced it—albeit a principle meant to prevent market distortions, rather than function as an explicit social-policy commitment. After that, the EU, through its Court of Justice, explicitly paid

<sup>3</sup> The OECD (2017) reports that the share of population from formerly Western Germany that believes a woman should not work at all when having pre-school children reduced from 46.6% in 2002 to 21.8% in 2012.

<sup>4</sup> Causal analysis would have been possible, for example in longitudinal studies that could establish the timing of the explanans and the explanandum. As we only look at one point in time, a statement about the direction of the causality is not possible (for more information on causal mechanisms, see Mayntz 2003).

more attention to gender issues, especially by ensuring equal treatment of men and women in the labour market by ruling out direct and indirect discrimination ([Timmer 2016](#)).

Thus, since its early days, the principle of gender equality was considered a key factor of the European Commission's policies ([Duncan 1995](#); [De Clementi 2003](#); [Ellina 2003](#); [Crespi 2007, 2009](#)). In 1997, by introducing the gender-mainstreaming perspective, it then became the goal of an actual strategy to promote equal opportunities between men and women. The definition of mainstreaming asserts that it is about "not restricting efforts to promote equality to the implementation of specific measures to help women but mobilising all general policies and measures specifically for the purpose of achieving equality" ([European Commission 1997](#), para. 6).

The gender-mainstreaming strategy is implemented through Directives, Recommendations, and Action Programmes ([Rees 1998, 2005](#); [Stratigaki 2000, 2005](#); [Moser and Moser 2005](#); [Di Sarcina 2010](#)), thereby requiring that member countries improve gender equality in their national contexts by adopting commonly oriented policies. To increase reliability in its programmes and support countries in local development of gender-mainstreaming policies, the European Commission implemented four-year action plans. The current one, the Strategic Engagement for Gender Equality 2016–2019, was launched in December 2015 ([European Commission 2015](#)). These latest European guidelines on equal-opportunity policies understand gender mainstreaming to be a transformative agenda in which gender issues become a core consideration, not simply for specific departments or ministries dealing with women, but rather for all actors across a range of issue areas.

Some implications of gender-equality policies exist at the European level that challenge actual gender regimes at the national level. For example, women's incomes across Europe are still below those of men, and policies for supporting unpaid care work have been developed modestly compared with labour-market activation policies. The resistance to the gender-mainstreaming process at different levels often is related to opposition from individuals and institutions to changes in gender norms and roles that are defined by specific cultural contexts, together with general relations between member countries and European institutions ([Lombardo and Mergaert 2013](#); [Bergqvist et al. 2013](#); [Verloo 2018](#)).

### *Work-Family Issues*

The Lisbon Council in 2000 and subsequent directives<sup>5</sup> invited the Commission and Member States to promote all aspects of equal opportunities in the field of employment policies, including the reduction of occupational segregation and the promotion of balancing work and family life, and to solve some of the increasing problems affecting several countries, such as lower and later fertility rates and the ensuing ageing of the population. These changes signal the importance of structural and economic aspects in examining the relations among family, gender, and work ([Plantenga and Remery 2005](#); [Fahlén 2014](#); [Daly 2015](#)). Gender equality is related to work and family issues because the traditional expectation that women will be responsible for their children can be a significant barrier to women's employment opportunities, contributing to the perpetuation of the gendered division of labour, power, and roles.

During the Lisbon Council, most European countries agreed on some daring and ambitious common goals in a framework for full employment<sup>6</sup> and stronger social and economic cohesion (the so-called Lisbon strategy). The council also identified new objectives for women in employment that aimed to increase female employment rates. The Lisbon agenda presents a coherent vision of a social model that can be characterised as a Europe-wide Adult Worker Model (AWM) in which paid

<sup>5</sup> Looking at the assumptions about gender roles and gender divisions of labor enshrined by EU directives on maternity rights and parental leave is extremely relevant. The main policies are the 1992 Pregnant Worker Directive, the 1996 Parental Leave Directive, the 1992 Childcare Recommendations, and the 2000 Council Resolution on Balanced Participation in Work and Family Life, and the most recent directive on parental leave in the Framework Agreement on Parental Leave, made binding by Council Directive 2010/18/EU (the Parental Leave Directive).

<sup>6</sup> The objective was to make Europe the "most competitive continent in the world", increasing productivity and employing twenty million more people within ten years.

employment for all adults exists to secure their economic independence. This also includes (single) parents and spouses in male-breadwinner couples, who formerly were assumed to be solely devoted to care-work roles and who are now also viewed as potential workers in the labour market, in which active labour-market policies, most notably on childcare, are provided. However, for the former group, this might simultaneously go hand in hand with reduced access to welfare support and increased conditions to receive benefits. Therefore, the AWM elicited a shift in policy assumptions at the EU level while highlighting some limits in the quest for a full adult-worker model based on the commodification of care provisions (Lewis and Giullari 2005).

While the AWM's welfare-supported system reorients the European social model to improve gender equality, labour-market policy fundamentally remains under the auspices of member states (Annesley 2007; Cavaghan 2017a, 2017b). Nonetheless, the male-breadwinner model has visibly weakened in Europe, and nowadays, dual-earner couples increasingly are more common in most EU member states. However, this ongoing transformation generally has concerned employment spheres rather than gender roles within families. In private life, the share of domestic work and (unpaid) care remain a bigger burden for women, even if a significant change regarding men's childcare roles has been documented (Le Bihan and Martin 2008; Le Bihan et al. 2013).

Gender equality cannot be achieved without societal recognition of the need to provide resources and support to help employees manage both work and family responsibilities. Moreover, in gender-egalitarian societies, women must be included in decision-making roles, in which they can influence policies to reflect the importance of work-family issues (Crespi and Miller 2013). Extant research has stressed the importance of structural and economic aspects regarding the relationships among family, gender, and work. The current paper focuses on individuals' attitudes in different national settings to better understand the potential impact of European-led gender-mainstreaming national practices on individual and family life.

### 3. Measuring Gender Equality in Europe

The previous section described the role of policies that the gender-mainstreaming perspective has inspired to reinforce gender equality in Europe. However, these policies, and more generally, the transnational culture oriented toward gender equality, must deal with different gender cultures and regimes established in individual European countries that present different historical and socio-political pathways (Aboim 2010; Pfau-Effinger 2004). Gender equality is a multidimensional concept; therefore, measuring gender equality levels can be very complex (EIGE 2017a; Grunow et al. 2018; Knight and Brinton 2017). Two principal perspectives exist: On one hand, composite indexes based on several indicators can provide information concerning the contextual situation on gender equality in a nation. In Section 3.1, we use the EIGE Gender Equality Index to describe the current status of gender equality in Europe. On the other hand, attention can be drawn to the individual perspective to measure to what extent people support gender equality. Section 3.2 focuses on this study's core issue—Europeans' support for gender equality as measured through individual attitudes toward gender roles.

#### 3.1. Gender Equality in European Countries

The European Institute for Gender Equality (EIGE)<sup>7</sup> developed a Gender Equality Index, which helps us understand the current state of European gender roles and their formation—a topic at the heart of this paper.

The EIGE index factors in 32 indicators that refer to the dimensions of "Knowledge", "Work", "Money", "Time", "Power", and "Health". For each of these domains, a sub-index also is calculated<sup>8</sup>.

<sup>7</sup> <http://eige.europa.eu/>.

<sup>8</sup> The EIGE index is computed following the methodology developed by the European Commission's Joint Research Centre and the Organization for Economic Co-operation and Development. Details concerning the indicator selection and the computation of the measures (weighting, aggregation, normalization, imputation) can be found in the EIGE Methodological

“Knowledge” is computed considering indicators of educational attainment and participation, the percentage of graduates with tertiary education, the share of people participating in formal or informal education, segregation, the share of tertiary students in education, health and welfare, and humanities and arts. “Work” includes indicators of economic participation, segregation, and quality of work. “Money” refers to financial resources and economic situations. “Time” summarises several indicators of gender gaps in the use of time (e.g., how much time men and women spend in care roles, as well as in housework, social, and cultural roles). “Power” mainly concerns female participation in responsibility roles in political, social, and economic institutions. “Health” refers to aspects of health and life expectancy, healthy behaviours, and access to medical and dental exams. The EIGE index provides scores from 0 (inequality) to 100 (equality). Examining the score of the EIGE index by country, Table 1 shows that gender equality remains a distant goal for most European countries and has not been reached to a similar degree in all European countries. According to this ranking, the most egalitarian countries are Sweden (82.6), Denmark (76.8), and Finland (73.0), while the least egalitarian are Greece (50.0), Hungary (50.8), and Slovakia (52.4).

**Table 1.** EIGE Gender Equality Index 2015 and sub-indexes by country ([EIGE 2017a](#)).

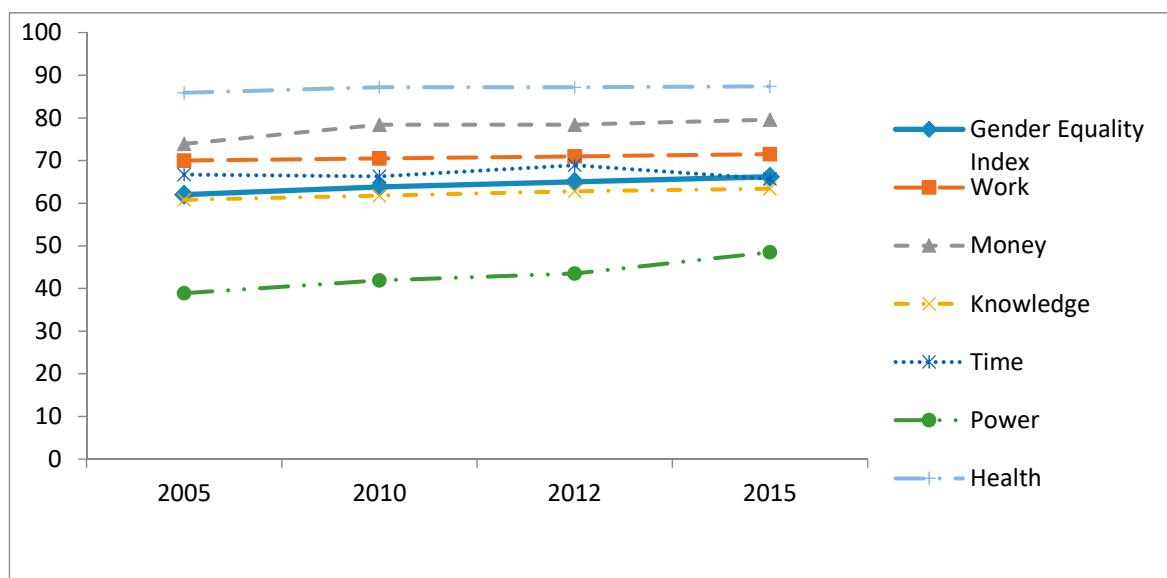
Country	Gender Equality Index	Domain Score					
		Work	Money	Knowledge	Time	Power	Health
EU-28	66.2	71.5	79.6	63.4	65.7	48.5	87.4
Sweden	82.6	82.6	87.5	72.8	90.1	79.5	94.1
Denmark	76.8	79.2	86.6	73.6	83.1	61.5	89.6
Finland	73.0	74.7	86.4	61.3	77.4	65.3	89.7
Netherlands	72.9	76.7	86.8	67.3	83.9	52.9	89.9
France	72.6	72.1	86.1	66.1	67.3	68.2	87.1
United Kingdom	71.5	76.6	81.2	71.8	69.9	53.0	93.1
Belgium	70.5	73.8	87.5	71.1	65.3	53.4	86.3
Ireland	69.5	73.9	84.7	66.4	74.2	48.6	90.6
Luxembourg	69.0	74.0	94.4	69.4	69.1	43.5	89.0
Slovenia	68.4	71.8	81.6	55.0	72.9	60.6	87.7
Spain	68.3	72.4	75.9	65.3	64.0	57.0	89.6
Germany	65.5	71.4	84.2	52.9	65.0	53.0	90.5
Austria	63.3	76.1	85.9	63.2	61.2	34.9	91.7
Italy	62.1	62.4	78.6	61.4	59.3	45.3	86.3
Malta	60.1	71.0	82.4	65.2	64.2	27.4	91.8
Bulgaria	58.0	68.6	61.9	53.3	42.7	56.0	76.4
Latvia	57.9	73.6	64.3	48.9	65.8	39.0	78.4
Poland	56.8	66.8	73.3	56.0	52.5	35.1	82.2
Lithuania	56.8	73.2	65.6	55.8	50.6	36.6	79.1
Estonia	56.7	72.1	66.7	53.2	74.7	28.2	81.5
Portugal	56.0	72.0	70.9	54.8	47.5	33.9	83.6
Cyprus	55.1	70.7	79.2	58.5	51.3	24.7	88.2
Czech Republic	53.6	66.1	75.9	57.3	57.3	22.6	86.0
Croatia	53.1	69.4	69.9	49.8	51.0	28.5	83.3
Romania	52.4	67.1	59.4	51.8	50.3	33.2	70.4
Slovakia	52.4	65.5	74.0	60.0	46.3	23.1	85.3
Hungary	50.8	67.2	70.7	56.9	54.3	18.7	86.0
Greece	50.0	64.2	70.7	55.6	44.7	21.7	83.1

Moreover, the scores gained in different domains confirm that gender equality is a multidimensional concept and that reaching equality in one dimension (e.g., labour-market participation) does not improve gender equality automatically in all other domains. The cases of Portugal, Estonia, and Cyprus are good examples of this, as their scores in the “Work” dimension resemble those of France and Germany, but their scores in the “Power” domain are very low. However, limiting the concept of gender equality to just one dimension would be short-sighted, as it would

lead to overlooking relevant aspects that keep gender inequality as a characteristic of daily life for many Europeans.

Considering Europe as a whole, gender equality improved during the 2005–2015 period. Figure 1 displays the overall Gender Equality Index trend in each of the five domains over time. The average Gender Equality Index for the EU28 improved from 62 in 2005 to 66.2 in 2015, but the scores differ by domain. While gender equality in the “Health” domain is quite high (85.9 in 2005 and 87.4 in 2015), and “Work”, “Time”, “Money”, and “Knowledge” show scores between 60 and 79, the “Power” domain (the presence of women in the public sphere) shows the lowest levels of gender equality. Nevertheless, the scores in this domain increased more than all the others (from 38.9 to 48.5). While everything seems to show signs of overall improvement in Europe’s gender equality, equality in the “Time” domain, which summarises gender gaps in the use of time for care work, housework, and social and cultural activities, is decreasing. After reaching 68.9 in 2012, in 2015, the gender gap in this domain increased, and the index fell to 65.7. Simultaneously, equality in the “Work” domain is increasing, together with financial prospects and political power.

“Time” and “Work” are dimensions of specific interest to the present study. The scores suggest that in countries such as Sweden (90.1), Netherlands (83.9), and Denmark (83.1), men and women can enjoy similar usage of time, while in Bulgaria (42.7), Greece (44.7), and Slovakia (46.3), a huge gender gap remains. This varying usage of time can reflect a combination of labour-market participation and institutional support for family care, thereby reflecting households’ arrangements in balancing work and family duties. These arrangements, also known as “gender contracts”, are not simply the result of individual preferences, but of the interplay of individuals’ values, partners’ negotiations, structural factors, and institutional opportunities (Aboim 2010; Fuwa 2004; Kangas and Rostgaard 2007). The opposing dynamics in the “Time” and “Work” domains of gender equality suggest that equality in the public sphere does not carry over to a fair distribution of activities and duties in private life.



**Figure 1.** EIGE Gender Equality Index EU28 2005–2015 (EIGE 2017a).

In fact, despite women attracting more recognition as effective actors in public realms, the private sphere remains the crucial arena for gender (in)equality (Ferge 1997). It is not just that primary socialisation processes transmit to children values and gender role models (Farré and Vella 2013; Idema and Phalet 2007; Moen et al. 1997), but in daily interactions, partners negotiate housework arrangements, establishing ‘gender contracts’ (Duncan 1995; Olsson 2012; Pfau-Effinger 1994) that comprise the division of tasks concerning participation in household income generation, childcare,

housework, and possible externalisation of some caregiving tasks. These interactions in the private sphere contribute to perpetuating or changing gender relations in society.

These interactions are not the simple result of individual preferences, but of the interplay of individuals' values, partners' negotiations, structural factors, and institutional opportunities (Aboim 2010; Fuwa 2004; Kangas and Rostgaard 2007). A gender contract can be established for several reasons, one of which entails individuals' gender ideology, which concerns values and attitudes that provide a structure for men and women to recognise their priorities, motivations, and interests.

On this basis, partners negotiate the overall arrangement of responsibilities and tasks, which is why we are particularly interested in studying gender-role attitudes, the measurable attribute of gender ideology. The role played by the individual gender ideology in leading behaviours, in particular in the sphere of the division of work between partners, has been documented by previous studies which also suggest that the translation of values in actions can be bounded by contextual opportunities, such as work-family balance policies (Crompton et al. 2005; Cunningham 2008; Davis and Greenstein 2009; Nordenmark 2004; Poortman and Lippe 2009).

### 3.2. Studying Gender Role Attitudes to Measure Europeans' Support for Gender Equality

Davis and Greenstein (2009, p. 89) define gender ideology as "the underlying concept of an individual's level of support for a division of paid work and family responsibilities that is based on the notion of separated spheres". A "traditional" gender ideology would support a clear separation of tasks by gender, with women dedicated to housework and childcare, and men dedicated to work outside the domestic sphere (i.e., the male-breadwinner model). Therefore, the gender contract and gender ideology are deeply connected—housework arrangements are the visible outcome of the underlying system of values and attitudes toward gender roles. These attitudes often are defined as the cognitive representation of what is believed to be appropriate for male and female roles (Alwin 2005; Lee et al. 2010).

Bergh (2006) extends this definition by stating that these attitudes refer to normative beliefs concerning gender roles in society and are, therefore, a good proxy for measuring individuals' support for gender equality. In this perspective, egalitarian gender-role attitudes support women's roles in the public sphere, as well as men's roles in the private sphere, with an underlying idea of sharing economic and caregiving responsibilities regardless of gender. On the other hand, traditional gender-role attitudes entail supporting the specialisation of tasks and roles by gender.

The comparative study of gender-role attitudes has not advanced quickly as of late, as most scholars have been focusing on single-country studies or on comparisons limited to less than seven countries (Kraaykamp 2012; Lomazzi 2017b; Motiejunaite and Kravchenko 2008; Lee et al. 2007; Scott et al. 1996; Scott and Braun 2009; Valentova 2013).

This extant literature has focussed mostly on socio-demographic factors' effects on gender-role attitudes, providing consistent results. Women tend to show egalitarian attitudes more than men due to differential socialisation experienced by boys and girls, based on gender expectations perceived within the family and school, and in their primary contexts (André et al. 2013; Davis and Greenstein 2009). People from older generations tend to support traditional attitudes toward gender roles more than those from younger generations. Younger people tend to be socialised in societies to be progressively more egalitarian, as they have been exposed to egalitarian ideals more than their parents and grandparents. According to Bolzendahl and Myers (2004), this exposure contributes to developing egalitarian attitudes. Other factors commonly indicated in extant studies as predictors of attitudes toward gender roles include education, employment status, family status, religiosity, income, and urbanity. People who have been socialised further into the educational system tend to have more egalitarian beliefs than those who are less-educated, as do those with more economic resources versus those living in urban contexts. Especially for women, being employed is often associated with higher support for egalitarian roles, but the causal relation in this case could work in both directions. Couples who have institutionalised their relationships through marriage tend to show traditional

attitudes more often than those who live in stable partnerships, are single, or who were previously married (e.g., separated, divorced, or widowed). Also, the bigger the size of the household, particularly the greater the number of children, the more support found for traditional attitudes toward gender roles (Baxter and Kane 1995). Even if religious doctrines are not opposed to gender equality, they traditionally tend to support a traditional division of roles between men and women (André et al. 2013; Davis and Greenstein 2009). Together with their values and norms, religious organisations transmit expected behaviours and roles that adherents should follow. As André et al. (2013) point out, attending religious services is a good indicator of an individual's degree of integration into the religious community and of his or her exposure to gendered expectations within such institutions. Results from extant studies (Brooks and Bolzendahl 2004; Motiejunaite and Kravchenko 2008; Sjöberg 2004) indicate that people with higher attendance at religious services tend to show traditional attitudes toward gender roles more than those who are less integrated into religious communities or not integrated at all.

However, very few extant studies to date (André et al. 2013; Moore and Vanneman 2003; Sjöberg 2004) have tried to explain gender role attitudes while considering a large number of countries and incorporating into their studies both individual and contextual factors, with the objective of comparing different contexts' impacts. These studies also confirm socio-demographic variables' effects when controlling for different opportunity structures, providing relevant insights for our study. In fact, in the present study, we are interested particularly in examining how the institutional level may shape individuals' support for egalitarian gender roles.

In extant studies, some key findings stand out: considering the moral perspective on gender roles, a country's religiosity level still can play a normative role. Despite a decline in religious precepts in many Western societies, the secularisation process is not homogenous in Europe. Inglehart and Norris (2003) describe the decline in religiosity as being more prominent in Scandinavian countries than in Central European societies, while Southern countries (e.g., Italy and Greece) are more strongly anchored to tradition. The exposure theory (Bolzendahl and Myers 2004) proposes that those living in contexts with higher proportions of people who are religiously integrated generally are more exposed to conservative social norms. Also, when this proportion increases, respondents may express conservative perspectives on uniform social expectations. The insights coming from this specific case can be extrapolated to the proportion of people integrated into the religious community at large, which includes those who are not necessarily fundamentalists, but who are socialised toward conservative views.

Kangas and Rostgaard (2007) evaluated the impact of structural and institutional factors on individual opinions on women's choice to participate in the labour market, demonstrating that in addition to structural factors such as education, income, and economic status, the opportunities that institutional factors provide, such as availability of childcare services and parental-leave schemes, affect these opinions, indicating that households' preferences for work-family balance are a matter not only of personal preferences, but also of contextual opportunity structures.

To consider personal opportunity structures, André et al. (2013) included the possibilities of combining paid work and family responsibilities through two indicators: government expenditures for family benefits and the length of parental leave. Despite expectations, they did not find any significant effect from these policies on egalitarian gender-role attitudes. However, the authors did find a plausible motivation for the insignificant effect of parental leave in two aspects. During data collection, very little information was available concerning parental leave used by fathers, and they factored in the length of parental leave by assuming that longer periods of leave would allow for better conciliation. However, the other side of the coin is that long leaves, which mothers mainly use in practice, confirm the traditional separation of gender roles. As for government expenditures, the fact that they are not affecting individuals' attitudes still requires investigation. Moreover, Sjöberg (2004) tested the effect of institutionalised family policies that aimed to support the dual-earner family and found a significant effect—policies that support the dual-earner family model increase support for egalitarian gender-role

attitudes, while in countries in which policies support the traditional single-earner family model, the effect was negative.

Female labour-market participation could appear as a relevant macro-level indicator that can explain individual support for egalitarian attitudes. Both [André et al. \(2013\)](#) and [Sjöberg \(2004\)](#) tested for this effect on the assumption that people living in countries with higher rates of female employment would support egalitarian gender role attitudes more than those in countries with fewer women participating in the labour market. But while [Sjöberg \(2004\)](#) did not find any effect, [André et al. \(2013\)](#) showed that higher proportions of women in the labour market decrease support for traditional gender roles. Furthermore, when testing for cross-level interactions, this effect is stronger for women than for men. However, this indicator generally is associated strongly with social policies that support the work-life balance. Women's participation in the labour market also can be considered to be the result of such policies. Because of this strict interconnection and the controversial results obtained from the two studies that included both social policies and female labour market participation, we will not include this indicator in our study<sup>9</sup>. In this way, we can better observe the opportunity structure's effects.

#### 4. Methods

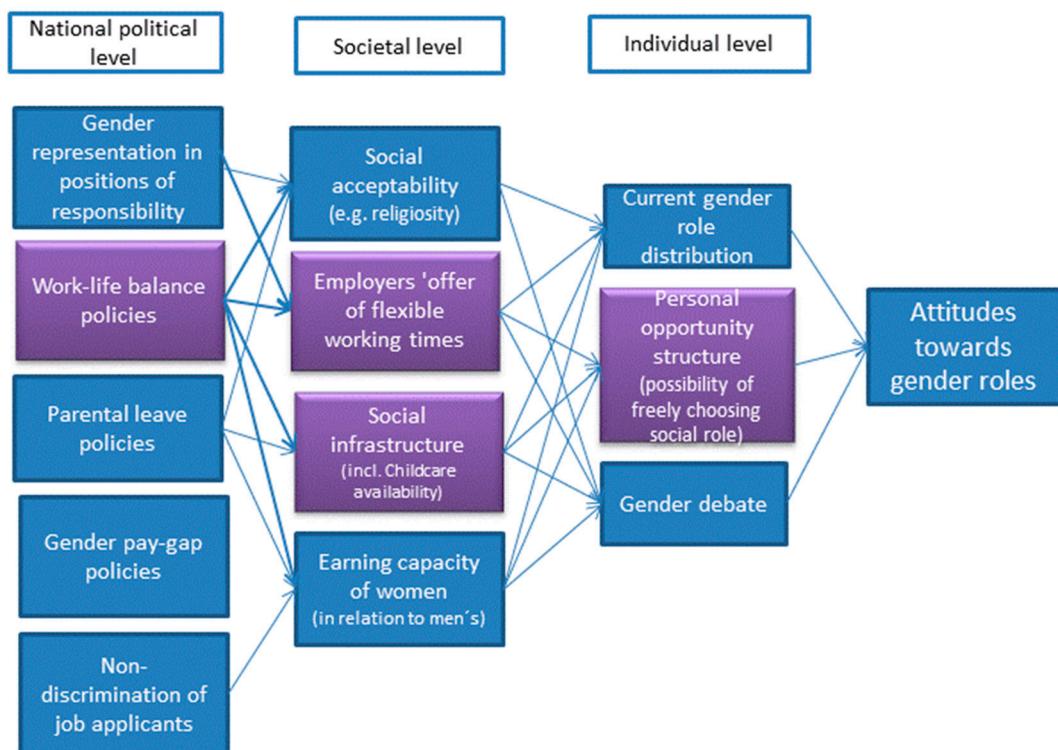
##### 4.1. Conceptualisation and Methodological Strategy

In the present study, we aim to adopt an articulated definition of opportunity structure. Previous studies ([André et al. 2013](#); [Kangas and Rostgaard 2007](#); [Sjöberg 2004](#)) referred to the structure of opportunities to explain the association between individuals' values and attitudes toward gender roles and the contextual framework that provides possibilities for men and women to realise their preferences. However, this conceptualisation often has been limited to considering only a couple of social policies.

The development of gender cultures is the result of ongoing negotiations between individuals and of the interactions between individuals' values and behaviours and societal institutional norms and practices ([Wharton 2005](#)). In such processes, the direction of causality is not one way—*institutions transmit a gendered culture which can affect individuals' values and behaviours and people can influence institutional frameworks*. In this study, we limit our attention to the influence of the country's institutions on individual gender ideologies. Institutional changes can influence behaviours and attitudes, but always are built on the present social structure. Even though we could not tackle the deep complexity that this type of structure would require, we provide our conceptualisation of the opportunity structure concerning the relation between policies inspired by the gender mainstreaming perspective and individual gender role attitudes in Figure 2. Our conceptualisation implies that personal attitudes toward gender roles are influenced on the individual level by current gender role distribution that is visible to the individual, his or her opportunity structure (in this case, linked to the ability to make choices between care work and paid work), and the gender debate as portrayed in the media. While these individual factors always will show the strongest relation to personal gender roles, it must be noted that they are influenced by the social structure and institutions surrounding the specific person on local, regional, and national levels, limiting not only the objective opportunity structure, but also the perspective of the individual situation due to social acceptability bias. With the arrows stemming from the national political level, we want to demonstrate that state policies here can intervene and shape gender-role attitudes through policy changes. Nonetheless, we also want to emphasise that this top-down approach does not provide the whole picture. In other instances,

<sup>9</sup> To support our choice, we run a robustness check (Table A6 in the Appendix A) and no significant changes arise when including female labour market participation.

demands for policy changes will come from the population directly (when the population's views on gender roles differ from those enacted through state policies).



**Figure 2.** The relation between gender mainstreaming and individual gender-role attitudes. Note: The causal pathway that we aim to describe in this study is marked in violet.

To control for social norms and ideas, we control, in all multi-level models, for living standard<sup>10</sup> and religiosity, which often are related to traditional family and gender-role attitudes.

Second, we analyse variables that describe a country's work arrangements, including workday length, work-time arrangements, and female earning capacity. These work-related structures determine demand for female employment (earning capacity) and show private companies' support for combining work and family lives.

In European countries, the average full-time workday length (which may include overwork time too) varies from 38.8 h in Denmark to 44.3 h in Greece, with a mean of 41 h (see Table 2). Workday length determines time spent at work and at home. Longer working days can reduce the ability to combine childcare with a full-time job (also because available childcare hours often are limited). Because of a reduced ability to reconcile paid and care work for both parents when the workday is long, we expect that overall hours usually worked in a full-time job will impact egalitarian gender role attitudes negatively. For women with small children, this negative effect may be even higher.

<sup>10</sup> The relationship between living standard and gender attitudes is complex. We assume that firstly, in countries with lower income, the need for additional household income will make female employment more likely (without necessarily leading to work-family policies). On the other hand, richer countries are more likely to adapt post-materialist policies directed at issues such as gender inequality.

**Table 2.** Macro-level variables<sup>12</sup> and their distribution across Europe.

Country	Country Indicators		Workplace Indicators				Institutional Indicators		
	Mean Earnings (in € PPP)	Religiosity (Weekly Attendance in % of Population)	Average Workday Length for Full-Time Workers (in h)	Flextime and Self-Determined Working Hours (in % of Workers)	Pay Gap Hourly, by NACE Activity, Unadjusted (% of Income Difference)	Childcare for Children below 3 Years old (in % of Children 0–3)	Childcare for Children 3 Years Old and up (in % of Children 3–6)	Length of Paid Maternity and Parental Leave (in Weeks)	Length of Paid Father-Specific Leave (in Weeks)
AT	2652	9.9	43.0	40.8	22.2	16	85.7	60	9
BE	2959	10.9	41.4	42.1	6.6	48.8	97.8	32	19
BG	900	4.8	41.2	17.9	14.2	11.2	71.6	110	2
CY	2043	25.1	42.4	21.2	14.2	25.5	79.6	18	0
CZ	1452	5.3	41.8	29.4	22.5	4.4	75.7	110	0
DE-E	3001	3.2	41.6	33.7	22.3	27.5	88.7	58	9
DE-W	3001	11.3	41.6	33.7	22.3	27.5	88.7	58	9
DK	3014	4.2	38.8	55.6	16	69.6	95.2	50	2
EE	1409	2.4	40.8	35.6	28.1	19.4	94	166	2
ES	2150	13.4	41.6	28.5	14.9	36.9	93.2	16	2
FI	2642	2.2	40.0	54.4	18.4	33.2	80.6	161	9
FR	2577	5.5	40.5	37.6	15.5	39.5	95.8	42	28
GB	2594	12.5	43.0	37.4	20.9	28.9	70	39	2
GB-NIR	2594	41.4	43.0	37.8	20.9	28.9	70	39	2
GR	1829	15.7	44.3	39.5	12.5	12.8	56.5	43	0
HR	1600	22.1	41.2	22.8	8.7	17.1	40.2	56	9
HU	1410	9.5	40.9	26.4	15.1	14.4	86.3	160	1
IE	3090	42.8	40.2	34.6	13.9	27.4	89.3	26	0
IT	2388	26.8	40.5	36.9	6.1	22.9	90.6	48	0
LT	1125	9.2	39.5	20.3	13.3	22.9	80.1	62	4
LU	3492	14.4	40.8	37.1	5.4	49	73.9	42	26
LV	1149	4.7	40.5	28.9	17.3	21.6	79.2	94	1
MT	2127	77	41.3	22.4	10.6	18.2	99.4	18	0
NL	2721	12.9	40.9	52.6	16.1	44.6	87.2	16	0
PL	1755	54	42.4	31.1	7.7	5.5	42.5	52	2
PT	1528	23.6	42.8	31.0	14.9	45	88.7	30	22
RO	980	22	40.5	22.9	4.5	2.6	55.8	57	5
SE	2850	5.5	40.8	57.5	13.8	56.8	94.8	56	14
SI	1938	13.4	41.9	36.4	7	37.4	90.3	52	3
SK	1372	40.5	41.7	18.1	19.7	6.5	74.7	164	0

Workers who can determine how to distribute their hours during the week can take hours off more easily for family or care reasons, enhancing their availability for care while working. This flexibility in the workplace can help workers manage work-life conflicts because it allows for a better balance of resources required to meet the demands within domestic and professional domains (Allen et al. 2013; Van der Lippe and Lippéniyi 2018). Several forms of flexibility are available, with some flexible arrangements concerning the place where the work activities are carried out (e.g., telecommuting and flexplace options). In other cases, flexibility entails working time by adopting such measures as flextime or flexible schedules (Rau and Hyland 2002). Extant research (Allen et al. 2013; Van der Lippe and Lippéniyi 2018) supports the idea that flextime impacts work-life balance more than flexplace. Thus, in the present study, we focus on work-time arrangements, which reflect the power that individual workers have over their schedules and the degree to which the company sets them without the possibility of changes.

Therefore, flextime can be viewed as worker empowerment of the work schedule, which makes family and work life more compatible and broaden the opportunities for the individual freedom of choice. In Europe, a third of workers work flextime, but the availability of flextime or choices on working hours are distributed very unevenly across Europe: In most Scandinavian countries (Finland, Denmark, and Sweden) and the Netherlands, more than half of workers can use flextime. In Slovakia, Bulgaria, and Lithuania, less than a fifth control their work schedules. We expect that when workplaces allow workers to manage their work-family balance with a certain degree of flexibility, gender-role attitudes tend to be more egalitarian, enabling women to be more available for paid work and men to be more available for care work.

A final factor controlling choices for women and men concerning paid work and unpaid care work is women's ability to earn the same pay as men (i.e., the so-called gender-pay gap). The wider the gender-pay gap, the less sense it makes for a household that is determining division of family responsibilities to conclude that the woman should remain in the labour market while the man takes care leave. Therefore, the gender-pay gap strongly reproduces existing gender role divisions, and we suppose that the existing gender-pay gap in any country will reinforce traditional gender ideologies. When looking at the unadjusted gender-pay gap, which is the difference between average gross hourly earnings between male and female employees (not adjusting for occupation and educational levels), we find that in Romania, Luxembourg, Italy, and Belgium, the differences are below 7%, while in the UK, Austria, Germany, the Czech Republic, and Estonia, they are above 20%.

Third, the institutional setting and the way in which the country's policies understand family and the role of mothers and fathers in society will be studied. According to extant literature, we expect that measures supporting the dual-earner/dual-caregiver family model elicits a positive effect on individual support for gender equality. In particular, we examine the parental leave scheme and the provision of childcare services as work-family balance policies.

Leave arrangements include gender-specific maternal and paternal leave and parental leave that can be shared, and in some cases, necessarily shared among partners (Moss 2014). Our analysis will focus on gender specific care policies, as they strongly mirror the role for women and men in each country and enable easier comparisons among countries. We retrieve information from the OECD Statistics<sup>11</sup> which define maternity paid leave and parental leave (for simplicity later referred as maternal leave) as the total number of weeks which a woman can be on paid leave after the birth of a child combining both maternity and parental leave. The paid father-specific leave refers to the number of paid weeks reserved for the exclusive use of fathers, including entitlements to paid paternity leave, 'father quotas' or periods of paid parental leave that can be used only by the father and cannot be transferred to the mother, and any weeks of paid sharable leave that must be taken by the

<sup>12</sup> The data for the macro indicators we obtained from Eurostat and the OECD and the European Quality of Life Survey. They refer to 2014 if not indicated otherwise. Definitions and sources are listed in Table A1 in the Appendix A.

<sup>11</sup> <https://stats.oecd.org/>.

father in order for the family to qualify for 'bonus' weeks of parental leave (for simplicity later referred as paternal leave). Maternity paid-leave arrangements (see Table 2) in most European countries range from eight to 15 months. However, it can be as little as four months (Spain, Netherlands, Cyprus, and Malta) or as much as two years (Latvia, Czech Republic, and Bulgaria), or even three years (Hungary, Finland, Slovakia, and Estonia), strongly influencing women's chances of reemployment after returning to the job market ([Schulze and Gergoric 2015](#)). Paternal paid leave arrangements are rather new to some countries and aim to promote fathers' care roles, but they are less common in Europe, with seven countries not even offering them. In eight other countries, the lengths vary between one to two weeks, to enable fathers to support mothers soon after birth (with paternal leave overlapping maternity leave). These kinds of paternal support schemes are not restructuring family models, but instead aim to promote female health. Only Austria, Germany, Finland, and Croatia (nine weeks); Belgium (19 weeks); and France (28 weeks) have paternal-leave systems that are comparable to maternal-leave arrangements and treat fathers as prime care providers.

The childcare provision is another important element of the institutional setting's support of dual-earner couples, regulated at national levels that vary widely in availability, price and scope. A particularly important division entails childcare systems for children 3 years old and up (traditionally supported in more traditional welfare systems) and those targeted at children below 3 years old. The start of childcare is related inversely to maternal- and paternal-leave systems. Again, broad variations can be found, depending on levels of familisation, institutionalisation, and marketisation of childcare ([Sjöberg 2004](#)). Informal arrangements are more common in Eastern European welfare states, which enhance female employment despite low levels of formal childcare provisions ([OECD 2016](#)). However, we decided to examine only formal arrangements, which reflect the state's support of care. Across Europe, less than a third of 0- to 3-year-olds are in formal care (27%). Scandinavian countries provide the highest levels of childcare, where it is framed as a social right. More than 50% of children ages 0–3 are in formal care in Denmark and Sweden (making formal care nearly universal among 0- to 3-year-olds), while in Slovakia, Poland, Romania, and the Czech Republic, less than 10% of children are in formal care (where informal care is high, however). For 3- to 6-year-old children, the picture is less diverse, and in most countries, more than 70% attend kindergarten. Only in Ireland, Slovakia, Greece, and Cyprus do numbers range from 40–55%.

#### *4.2. Measure of Gender Role Attitudes*

The data used stem from the Eurobarometer 82.4 ([European Commission and European Parliament 2015](#)). The Eurobarometer is a survey conducted twice a year on behalf of the European Commission. The standard Eurobarometer asks for attitudes toward European policies and institutions and general socio-political orientations. Eurobarometer 82.4 covered 28 European countries<sup>13</sup> using probability sampling and face-to-face interviews<sup>14</sup>. We restricted our sample to working-age men and women (age 18–65) who are not retired and obtained a case total of 16,843, of which 7483 are male and 9360 are female.

The survey included a battery of five items asking for responses to the following statements (respondents could rate their agreement levels from 1, 'Totally agree', to 4, 'Totally disagree'):

1. All in all, family life suffers when the mother has a full-time job.
2. Women are less willing than men to make a career for themselves.
3. Men should work more in childcare sectors, such as day nurseries.

<sup>13</sup> Austria (AT); Belgium (BE); Bulgaria (BG); Cyprus (CY); Czech Republic (CZ); Germany (DE); Denmark (DK); Estonia (EE); Spain (ES); Finland (FI); France (FR); Great Britain (GB-GBN); Northern Ireland (GB-NIR); Greece (GR); Croatia (HR); Hungary (HU); Ireland (IE); Italy (IT); Lithuania (LT); Luxembourg (LU); Latvia (LV); Malta (MT); Netherlands (NL); Poland (PL); Portugal (PT); Romania (RO); Sweden (SE); Slovenia (SI); Slovakia (SK).

<sup>14</sup> More information concerning the sampling, way of data collection, response rate can be found in ZA5933: Eurobarometer 82.4 (2014). Methodology ([GESIS 2018](#)).

4. Overall, men are less competent than women to perform household tasks.
5. A father must put his career ahead of looking after his young child.

Results from the exploratory factor analysis (see Table A2 in the Appendix A) indicate that Item 3 ('Men should work more often in childcare sectors, such as day nurseries') yielded very poor factor loading and does not load on the same factor as the other four items. Therefore, we excluded it from further analyses. Hence, the remaining four items were used to measure the latent concept of gender ideology.

[Davis and Greenstein \(2009\)](#), pp. 89–91 conducted an extensive review of the items used to measure gender ideology in global cross-sectional surveys, classifying them into six categories according to the content investigated: primacy of the breadwinner role, belief in gendered separate spheres, working women and relationship quality, motherhood and the femininity, household utility, and acceptance of male privilege. Using content or wording similar to the items that [Davis and Greenstein \(2009\)](#) reviewed, the four items in our measurement of gender ideology can be classified into these categories: 'working women and relationship quality' (Item 1); 'acceptance of male privilege' (Item 2); 'belief in gendered separated spheres' (Item 3); and 'primacy of breadwinner model' (Item 4). Our latent variable then can tap different dimensions of gender ideology. Alongside interest in content validity, we also are concerned about the suitability of this measurement for comparative analyses. We then assessed measurement equivalence of this concept across the 28 countries included in the dataset by employing both traditional Multigroup Confirmatory Factor Analysis (MGCFA) ([Byrne et al. 1989](#); [Davidov et al. 2011](#); [Steenkamp and Baumgartner 1998](#)) and the recently developed frequentist alignment procedure ([Asparouhov and Muthén 2014](#); [Lomazzi 2018](#)). We ran both analyses using MPlus 8 (<https://www.statmodel.com>), and both techniques demonstrated that the measurement is adequate for our study's purposes. By performing MGCFA, partial metric invariance is achieved (see Table A3 in the Appendix A). Even though metric invariance is not enough to allow for means comparison, this is an acceptable precondition for employing this measurement as a dependent variable in regression models ([Byrne et al. 1989](#); [Chen 2007](#); [Steenkamp and Baumgartner 1998](#)). Nevertheless, employing the alignment procedure confirms a good degree of equivalence—only 12% of the parameters are not invariant (see Table A4 in the Appendix A). Considering that the cut-off criteria suggest that up to 25% are allowed ([Muthén and Asparouhov 2014](#)), the alignment procedure indicated that the factor comparison is trustworthy. This result provides further consistency with findings from recent extant studies ([Asparouhov and Muthén 2014](#); [Cieciuch et al. 2018](#); [Munck et al. 2017](#); [Lomazzi 2018](#)) in the field of measurement equivalence, which explores new techniques, such as the alignment optimization, to overcome limits in traditional MGCFA that are considered too strict, especially when dealing with many countries.

The Gender Ideology Index is measured through scores assigned to the items, ranging from 1, meaning no support for gender equality, to 4, indicating maximum support for egalitarian gender roles. Table 3 displays scores by country and the size of valid samples. People living in Sweden, Denmark, the Netherlands, and France appear to be the most supportive of gender equality. Conversely, respondents from Hungary, Bulgaria, Austria, and Italy expressed the lowest support for egalitarian gender roles.

#### 4.3. Multi-Level Model

We conduct an analysis of the determinants of gender role attitudes using linear multi-level models for 29 countries. The multi-level model enables us to factor in the clustered nature of Eurobarometer data (with individuals clustered within countries) ([Cameron and Trivedi 2010](#)). Through this method, we can differentiate between influences from the micro-level and influences from country-specific factors, thereby avoiding standard errors through related answers of individuals from the same country ([Rabe-Hesketh and Skrondal 2008](#)). Random intercept models are applied that allow country-level indicators to have different intercepts, but the same slopes. Great care was taken not to include post-treatment controls ([Gelman and Hill 2006](#)), which are micro-level factors that distort the effect of macro-level indicators due to their subsequent causal ordering. For this reason, e.g., activity status

was not included in the models, considering that being employed or a housewife is an outcome of opportunity structure created by institutional macro-level factors (e.g., leave policies and childcare), whose impact we want to analyse in the first place.

**Table 3.** Support for egalitarian gender roles (Gender Ideology Index).

Country	Gender Ideology Index	N (Valid Cases)
Austria	2.3796	1021
Belgium	2.8052	1004
Bulgaria	2.3333	970
Croatia	2.6856	993
Cyprus (Republic)	2.7852	497
Czech Republic	2.5776	1029
Denmark	3.1116	1007
Estonia	2.7906	956
Finland	2.9309	985
France	2.9425	996
Germany (West)	2.5687	1020
Germany (East)	2.7262	524
Great Britain	2.859	975
Greece	2.539	1005
Hungary	2.2985	1043
Ireland	2.6157	983
Italy	2.3895	992
Latvia	2.5987	988
Lithuania	2.5534	987
Luxembourg	2.7128	499
Malta	2.5764	496
Netherlands	2.9968	1001
Northern Ireland	2.9434	304
Poland	2.4533	955
Portugal	2.6342	992
Romania	2.4545	996
Slovakia	2.4577	1000
Slovenia	2.7239	1023
Spain	2.6425	987
Sweden	3.3102	1020

We construct separate models for men and women, given that their different positions and socialisation in society make it likely that individual factors (e.g., family background, education, income, and location) influence their gender-role attitudes to different degrees and that a varying influence also should be expected for social policies and work arrangements. This is particularly clear for maternal- and paternal-leave systems, as well as for childcare that is likely to expand the opportunity structures for women more than those for men. Moreover, as we consider institutions that elicit the most impact on the working-age population, we limit the sample to those ages 18–65 who are not retired<sup>15</sup>.

In the models, var\_sum ( $\sigma_t = \sigma\mu + \sigma\varepsilon$ ) shows the total variance of the model, and var\_u1 ( $\sigma\mu$ ) shows the variance attributed to the country level. From these, we can deduce intra-class correlation (ICC)<sup>16</sup> between respondents within countries. It shows how similar the gender attitudes are among countries. The higher the ICC is in the intercept-only model (M0), the higher the proportion of variance explained by the country level (Hox 2010). The more the ICC can be reduced when subsequently adding macro-level predictors, the better the explanatory power of these predictors. The Bayesian information criterion (BIC) is based on the log-likelihood fit of the model and assesses the model's fit and parsimony, while factoring in the number of explanatory variables and the number of cases (Singer and Willet 2003). Stata15 and the multilevel command xtmixed were used to construct the model.

<sup>15</sup> Also analysing the impact on the population at large would have been interesting, however taking the whole population into perspective might have veiled the significant effect on our specific group of analysis.

<sup>16</sup>  $ICC = \sigma_\mu^2 / (\sigma_\mu^2 + \sigma_\varepsilon^2)$  with sigma referring to the population-level estimates of variance.

## 5. Results and Discussion

The empty model (Table 5, M0) of the multilevel analysis shows that the ICC is 16%. The cross-national variation seems slightly lower for men than for women. Thus, a sixth of the variation in gender attitudes can be explained through cross-national differences. A much higher degree of variation can be linked to respondents' personal characteristics (e.g., age or education level). Results are provided separately for men and women, and differences in the characteristics' influences are strongly visible.

### 5.1. Micro-Level Results

Table 4 reports the effects of variables tested at the micro-level. Our results confirm extant studies' socio-demographic predictors (André et al. 2013; Baxter and Kane 1995; Bolzendahl and Myers 2004; Kraaykamp 2012; Valentova 2013). For both genders, younger people are more egalitarian than older people. Household characteristics show different impacts. For men, their household composition does not influence their attitudes toward gender roles. Compared with a married man with children, only those separated and living with children (single fathers) show more gender-egalitarian attitudes. Among women, singles with or without children and those with a partner and no children have more gender-egalitarian attitudes, and the number of children in a household is a predictor of gender ideology: the more children in a household, the more these women view women's place to be at home, not out doing paid work.

The higher the education level, the more gender egalitarian the views of men and women, with (related) higher income also associated with less traditional views for both genders. The impact of locality interestingly only is observed with women, with those from urban backgrounds more egalitarian.

### 5.2. Macro-Level Results

Table 5 shows the results at the macro-level<sup>17</sup>. In the first model, the control variables for living conditions and religiosity are added to the model. Living conditions are supposed to portray the economic opportunities within a country and the average income within a household. They are linked positively to gender-egalitarian views for men and women. Religiosity, on the other hand, is only significant at the 10% level for women, although the overall differences in effect seem small between the genders and could be linked to the lower-case number for men. The control variables explain 41% of the cross-national variance in the male model and 44% of the variance in the female model.

In the second model, indicators linked to workplace arrangements and pay are added. We expected overall hours worked at a full-time job to elicit a negative impact on the integration of women, and women with small children in particular, into the labour market, attributed to more traditional attitudes toward gender roles. A negative effect is shown, but it is insignificant. The hourly gender-pay gap can create another reason for traditional work-care differentiation within the household, but it also is insignificant. However, the final indicator of the workplace arrangement, the ability to decide on work schedules, including whether to use flextime (being able to spread working hours freely throughout the week), shows a strong positive influence on gender-egalitarian attitudes. This confirms that policies also exist at the private economy and individual firm levels to support the integration of women within the labour market, and thus, gender mainstreaming.

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<sup>17</sup> Separate results were calculated including the activity status (care work, paid work, or unemployed) on the micro-level, the results did not change in significant ways. The results of these analysis can be delivered from the authors upon request. Due to effects of post-treatment controls (Gelman and Hill 2006), see methodological section, the results without activity status in the micro-level was preferred.

**Table 4.** Micro-level results.

Categories	Variables	M4a Male	M4b Male	M4a Female	M4b Female
Y=Support for egalitarian gender roles index		b/t	b/t	b/t	b/t
Age	(From 18 to 65)	-0.004 ** (-5.86)	-0.004 ** (-5.88)	-0.003 ** (-4.40)	-0.003 ** (-4.47)
Family type (Ref. Married with children)	Married, no children	-0.039 + (-1.68)	-0.040 + (-1.72)	-0.029 (-1.39)	-0.027 (-1.26)
	Partner, no children	0.014 (0.51)	0.011 (0.41)	0.079 ** (2.85)	0.071 ** (2.57)
	Separated, no children	0.057 + (1.72)	0.052 (1.58)	0.008 (0.25)	0.001 (0.04)
	Separated, with children	0.234 ** (4.41)	0.233 ** (4.37)	-0.023 (-0.83)	-0.032 (-1.16)
	Single, no children	0.005 (0.20)	0.000 (0.01)	0.055 * (2.22)	0.047 + (1.91)
	Single, with children	0.019 (0.26)	0.016 (0.22)	0.105 ** (2.92)	0.110 ** (3.05)
Education (Ref. Primary education)	Number of children in household	-0.015 + (-1.68)	-0.016 + (-1.69)	-0.028 ** (-3.50)	-0.024 ** (-2.98)
	Secondary education (up to 19 years)	0.151 ** (5.33)	0.154 ** (5.41)	0.120 ** (4.91)	0.093 ** (3.76)
	Tertiary education (20 years and up)	0.259 ** (8.77)	0.263 ** (8.86)	0.288 ** (11.17)	0.251 ** (9.49)
	Still studying	0.164 ** (4.05)	0.138 (1.63)	0.290 ** (7.56)	0.361 ** (8.77)
Activity status (Ref. Care work)	Paid employment		-0.035 (-0.46)		0.117 ** (5.77)
	Unemployed		-0.007 (-0.09)		0.057 * (2.21)
Income (Ref. Often have income difficulties)	Never had income difficulties	0.122 ** (4.71)	0.130 ** (4.88)	0.124 ** (5.62)	0.117 ** (5.27)
Community (Ref. Rural)	Urban	0.017 (0.92)	0.018 (0.94)	0.042 * (2.39)	0.040 * (2.28)
N (number of respondents)		7483	7483	9360	9360
ICC		0.146	0.146	0.131	0.131
var_u1 ( $\sigma_{\mu}$ )		0.062	0.061	0.057	0.056
var_sum ( $\sigma_1 = \sigma_{\mu} + \sigma_{\varepsilon}$ )		0.422	0.422	0.436	0.434
BIC		13.751	13.913	17.791	17.773
ll		-6.854	-6.854	-8.799	-8.781

Note: Displayed are analyses for men (general model and model with activity status) and women (general model and model with activity status). T-statistics are shown in brackets. Confidence levels: + p/z<0.1; \* p/z<0.05; \*\* p/z<0.001. The following categories were controlled for, but not displayed, because they did not differ significantly from the control group: Partner, with children, No full-time education, No income information, Sometimes income difficulties, Small town.

**Table 5.** Macro-level results.

Category	Variables	M0 Male	M0 Female	M1 Male	M1 Female	M2 Male	M2 Female	M3 Male	M3 Female	M4 Male	M4 Female
Country characteristics	Living standard			<b>0.019 **</b> (3.76)	<b>0.018 **</b> (3.76)	0.005 (0.76)	0.005 (0.81)	0.003 (0.65)	0.006 (1.04)	-0.004 (-0.81)	-0.002 (-0.44)
	Religiosity			-0.004 (-1.63)	-0.003 + (-1.68)	0.000 (0.07)	-0.000 (-0.01)	-0.000 (-0.25)	-0.000 (-0.07)	0.001 (0.54)	0.001 (0.30)
Workplace arrangement	Average hours worked in full-time job					-0.027 (-0.94)	-0.021 (-0.76)				
	Hourly gender-pay gap					0.004 (0.61)	0.004 (0.67)				
	Ability to choose worktime or flextime					<b>0.014 **</b> (3.26)	<b>0.014 **</b> (3.13)			<b>0.009 *</b> (2.45)	<b>0.009 *</b> (2.34)
Institutional arrangement	Availability of formal childcare for 3- to 6-year-olds							-0.003 (-1.30)	-0.003 (-1.37)		
	Availability of formal childcare for 0- to 3-year-olds							<b>0.014 **</b> (4.96)	<b>0.013 **</b> (4.21)	<b>0.010 **</b> (4.21)	<b>0.008 **</b> (3.23)
	Length of paid maternal leave							0.000 (0.43)	0.001 (1.07)		
	Length of paid paternal leave							-0.004 (-0.97)	-0.001 (-0.35)		
N (number of respondents)	7483	9360	7483	9360	7483	9360	7483	9360	7483	9360	
ICC	0.166	0.154	0.097	0.086	0.070	0.064	0.050	0.053	0.045	0.048	
var_u1	0.075	0.073	0.039	0.035	0.027	0.026	0.019	0.021	0.017	0.019	
var_sum	0.449	0.472	0.400	0.415	0.388	0.405	0.379	0.400	0.377	0.398	
BIC	14.028	18.125	13.901	17.796	13.918	17.814	13.917	17.817	13.896	17.796	
Log-likelihood	-7.001	-9.049	-6.848	-8.792	-6.843	-8.788	-6.838	-8.785	-6.836	-8.784	

Note: T-statistics are shown in brackets. Confidence levels: + p/z\0.1; \* p/z\0.05; \*\* p/z\0.001. In bold: significant effects.

In the third model, institutional arrangements are added to the control variables. The availability of formal childcare for 3- to 6-year-olds does not show an impact on gender role attitudes. This is not greatly surprising, as the use of childcare within this age group is rather high throughout Europe. For 0- to 3-year-olds, a strong positive effect is shown in the male and female models. Therefore, for men and women alike, pre-kindergarten institutional care's presence strengthens their gender-egalitarian attitudes. However, in the case of childcare indicators, we must caution for reverse causality, as we are analysing the use of childcare, not the availability of childcare. Theoretically speaking, gender-egalitarian attitudes are more likely to precede the personal need for preschool childcare than to be driven by the simple availability of places.

Moreover, leave arrangements were analysed in this model. This is the only institutional factor included in our model that other studies have analysed as well, allowing for some comparison with results from extant research. André et al. (2013) demonstrated that the effect of parental leave length was insignificant. Here, we tried to articulate this factor by considering maternal and paternal leave separately. However, neither paternal nor maternal leave arrangements showed any significant effect. Also, a quadratic term of leave was introduced to check for non-linear relationships,<sup>18</sup> but it also was insignificant. Therefore, a longer maternal leave does not seem to relate to more traditional attitudes, nor does the presence of paternal leave relate to more egalitarian attitudes toward gender roles. However, the system's strictness must be considered as a factor that we cannot control, and that could influence this result. The European countries vary to the degree that the maternal-leave systems are adaptable to personal needs (also depending on childcare availability). A system with longer paid maternal leave could be more successful in gender mainstreaming if it allows mothers to end leave before leave pay runs out, than a system with reduced maternal leave that makes no provisions for earlier return to the labour market.

However, with paternal leave, its availability on an institutional level will not be able to induce changed behaviours as long as company-level determinants (e.g., lack of acceptance of paternal leave) prevent them. Therefore, we can deduct from the results that leave systems cannot influence gender role attitudes, as their complexity (and links to childcare availability) restricts analysis.

When comparing the effect of institutional (childcare) and company-based effects to explain cross-national variations in attitudes toward gender roles, the ICC shows that the institutional side can explain more about the variation than the company-based explanations. However, the cross-national variance is reduced more strongly when introducing institutional factors for men (48%) than for women (38%). This division is also reflected in the childcare coefficient's stronger influence with men. Conversely, in the female model, the company side explains much more of the variance (26% instead of 18%). This confirms that the personal-opportunity structure for women (i.e., the ability to choose their social roles freely within care or paid work) is much more strongly determined by flexibility in working hours than for men, which, in turn, influences their attitudes).

## 6. Conclusions

This paper's overall objective was to shed light on the implications of work-family opportunity structures, both institutional and company-based, for individual gender-role attitudes. The use of multi-level models and work-time arrangement data from the European Quality of Work Survey allows us to contribute original results to extant literature in this field. So, do national policies inspired by the European gender-mainstreaming framework make Europeans more gender-egalitarian?

Our study's results indicate that even though support for gender equality is still explained mainly through sociodemographic factors, the role played by the context of opportunities cannot be

<sup>18</sup> A quadratic term could be expected, based on the idea that neither very short, nor very long leave policies adequately address the problem of balancing child-parent bonding and gender mainstreaming and labour market return (see also André et al. 2013).

neglected. In a different analytical setting, we confirmed André et al. (2013) results regarding the insignificant effect of the parental leave scheme on individual support for gender equality. Given that the introduction of paternal leave is still a recent phenomenon in some countries (and that it remains unavailable in most European countries), it could be that we need to wait longer to witness any effects on individual attitudes. However, work-family policies implemented in workplaces seems to be very effective in transmitting values on equality. For the first time, we demonstrated that the ability to choose worktime or flextime elicits a positive effect on support for gender equality. This suggests that the introduction of such policies should be encouraged, together with other work-family balance policies that governments implemented. The European Commission's 2016–2019 Gender Equality Strategic Engagement plan mentions flexible working arrangements as the first key action under the heading 'Increasing female labour-market participation and the equal economic independence of women and men'. Although this indicates an awareness of the importance of such policies, Zbyszewska (2016) notes that the lack of any mention of the worktime directive in the strategy plan, roadmap, and consultation of social partners makes the effective accommodation of care within paid work and its redistribution between men and women unlikely in the coming years on a European level.

While our study faces several limitations—above all, the difficulty in observing causation in a cross-sectional analysis setting, enhanced by the likelihood of lagged effects for attitude variables (given their mediation through personal opportunity structures on one hand and current gender role distribution and gender debate on the other hand)—our results can provide the first indication of the importance of both institutional and work-based factors for gender role attitudes among men and women. Further research could provide deeper investigations into the process of transmitting gender cultures (e.g., by expanding analysis of the nexus of attitudes toward gender roles and the societal context, or by considering EU members' various pathways to assess whether differences in exposure to gender mainstreaming affect individual gender beliefs). Furthermore, more complex research designs could investigate reciprocal influences between individual attitudes and policies. Following the line of reasoning of previous studies (André et al. 2013; Grunow et al. 2018; Kangas and Rostgaard 2007)<sup>19</sup>, our study focussed on the impact of macro-level factors on individual attitudes, providing some more empirical results and new insights on the effect of workplace practices on egalitarian attitudes. However, individuals' gender-role attitudes can also affect policies and other societal institutions. Some studies investigated this causality direction (Arpino et al. 2015; Cunningham 2008; Stickney and Konrad 2007), but to our knowledge, a comprehensive study that includes both bottom-up and top-down perspectives on the causal relation between gender cultures remains lacking. Finally, an additional research stream involves the issue of multidimensionality of gender equality. As resulted from our preliminary analysis (see Table A2), our measurement of gender role attitudes is mono-dimensional. However, we know from extant literature (Constantin and Voicu 2015; Davis and Greenstein 2009; Walter 2017) that a proper operationalisation should comprise items covering different dimensions of gender role attitudes and that contextual predictors may not have the same effect on different dimensions. In addition, individual gender ideologies are not always collocated on a continuum from traditional to egalitarian views, for example, people can express different forms of egalitarianism (Grunow et al. 2018; Knight and Brinton 2017). Adopting this approach, the construction of the dependent variable should also take into account the multidimensionality of gender ideology.

Considering the results obtained in the present study, we can conclude that achieving greater equality between women and men requires changes at many levels, including changes in attitudes

<sup>19</sup> In their recent article, Grunow et al. (2018) adopt Latent Class Analysis to identify typologies of gender ideologies. Because of the aim of their study (to examine the form in which gender ideologies cluster in different countries) and of the type of technique used, they did not test for causal links but they found an association between the egalitarian gender ideologies and the work-family policy support for joint earning and caring, which in the current study we tried to examine. Kangas and Rostgaard (2007) demonstrated the contextual impact of institutional factors (e.g., availability of childcare services and parental-leave schemes, on women's individual preferences for labor-market participation). With a similar perspective, Sjöberg (2004) and André et al. (2013) investigated the effect of work-family balance policies on gender-role attitudes.

and relationships, changes in institutions and legal frameworks, changes in economic institutions, and changes in political decision making structures through a kind of gender mainstreaming that is oriented toward empowering all individuals.

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## Appendix A

**Table A1.** Macro variables for 2014: definitions and sources of the macro-level variables.

Concept	Variable	Source
<b>Living standard</b>	mean monthly earnings, in Euro PPP	Eurostat 2014, [earn_ses14_20]
<b>Religiosity, 2010</b>	% of population weekly attending mass	Eurobarometer 2010 ( <a href="#">European Commission and European Parliament 2010</a> )
<b>Length of the workday</b>	Average weekly hours worked in main job for full-time workers	Eurostat 2014 [lfsq_ewhun2]
<b>Female earning capacity</b>	Gender pay gap in unadjusted form by NACE Rev. 2 activity	Eurostat [earn_gr_gpgr2]
<b>Work-time arrangements</b>	Percentage of those stating they can adapt their working hours within certain limits (e.g., flexitime) or working hours are entirely determined by themselves	European Quality of Work Survey 2014
<b>Childcare of kindergarten children</b>	Availability of formal childcare for 3–6-year olds: Children in at least 1 h of formal childcare or education by age group,—% over the population of each age group	Eurostat 2014 [ilc_camnforg0]
<b>Childcare for pre-kindergarten children</b>	Availability of formal childcare for 0–3-year olds: Children in at least 1 h of formal childcare or education by age group and duration—% over the population of each age group	Eurostat 2014 [ilc_caindformal]
<b>Maternal leave arrangements</b>	Total paid leave available to mothers including paid maternity leave and paid parental and home care leave, length in weeks	OECD 2014
<b>Paternal leave arrangements</b>	Total paid leave available to fathers including paid paternity leave and paid parental and home care leave reserved for fathers, length in weeks	OECD 2014

Note: we tested for the length of a part-time job and the ability to take easily 1–2 h per day off for family matters but excluded them because they did not add theoretically or methodologically to the chosen model.

**Table A2.** Exploratory factor analysis results—factor loadings in the rotated factor matrix.

Item	5-Item Model		4-Item Model
	Factor 1	Factor 2	Factor 1
V1. All in all family life suffers when the mother has a full-time job	0.490	−0.140	0.509
V2. Women are less willing than men to make a career for themselves	0.514	0.218	0.472
V3. Men should work more in childcare sectors, such as day nurseries	0.000	0.122	—
V4. Overall men are less competent than women to perform household tasks	0.579	−0.274	0.556
V5. A father must put his career ahead of looking after his young child	0.508	0.110	0.505

Note: Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation.

**Table A3.** Multigroup confirmatory factor analysis—global fit measures for the measurement equivalence of the 4-items model, full sample.

Model	Chi2 (df)	RMSEA	CFI	SRMR
Configural	41.668 (30)	0.02	0.999	0.008
Metric	382.271 (117) ***	0.049	0.968	0.037
Partial metric (1, 2)	137.891 (59) ***	0.038	0.990	0.02
Scalar	3.090.131 (204) ***	0.124	0.647	0.106
Partial scalar (4, 1)	933.745 (146) ***	0.076	0.904	0.052

Note: df = degrees of Freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $0.01 \leq p \leq 0.1$ .

**Table A4.** Alignment results. Approximate measurement (non) invariance for intercepts and loadings of the 4-item model (12% non-invariant parameters).

Item	Intercepts														Loadings																					
	1	2	3	4	(5)	(6)	(7)	(8)	(9)	(10)	11	12	13	(14)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	(18)	19			
V1																																				
	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)																									
	(27)	(28)	(29)	(30)	(32)																															
V2																																				
	1	2	(3)	4	5	6	(7)	8	9	10	11	(12)	13	14	16	17	18																			
	19	20	21	22	23	24	25	26	27	28	29	30	(32)																							
V4																																				
	1	2	3	4	(5)	6	7	8	9	(10)	11	12	13	14	16	17	18	19																		
	20	21	22	23	24	25	26	27	28	29	(30)	(32)																								
V5																																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	(17)	18	(19)																		
	20	21	22	23	24	25	26	27	28	29	30	(32)																								

Note: numbers indicate the country code (see Table 1). The parentheses indicate whether the parameter (intercept or factor loading) is non-invariant for that specific group (country code<sup>20</sup>) by variable (V1, V2, V4, V5—complete item wordings are reported in Table A2).

**Table A5.** Correlation matrix macro-level variables.

	Mean Earnings	Religiosity	Length Workday	Gender Pay Gap	Flextime	Childcare 3–6	Childcare 0–3	Maternal Leave	Paternal Leave
Mean earnings	1.0000								
Religiosity	-0.0456	1.0000							
Length workday	-0.0739	0.2114	1.0000						
Gender Pay gap	0.0518	-0.3535	0.1106	1.0000					
Flextime	0.7164	-0.3429	-0.1490	0.1097	1.0000				
Childcare 3–6	0.4383	-0.2877	-0.3313	0.2807	0.3842	1.0000			
Childcare 0–3	0.6606	-0.3172	-0.3256	-0.0664	0.7067	0.6011	1.0000		
Maternal leave	-0.4428	-0.2532	-0.1900	0.4397	-0.1741	-0.0505	-0.4094	1.0000	
Paternal leave	0.3358	-0.2311	-0.0232	-0.1536	0.2318	0.2237	0.4644	-0.2261	1.0000

<sup>20</sup> Country codes: 1 = France; 2 = Belgium; 3 = Netherland; 4 = Germany West; 5 = Italy; 6 = Luxembourg; 7 = Denmark; 8 = Ireland; 9 = Great Britain; 10 = North Ireland; 11 = Greece; 12 = Spain; 13 = Portugal; 14 = Germany East; 16 = Finland; 17 = Sweden; 18 = Austria; 19 = Cyprus; 20 = Czech Rep.; 21 = Estonia; 22 = Hungary; 23 = Latvia; 24 = Lithuania; 25 = Malta; 26 = Poland; 27 = Slovakia; 28 = Slovenia; 29 = Bulgaria; 30 = Romania; 32 = Croatia.

**Table A6.** Robustness check of macro-level variables (excluding macro-level controls—GDP and religiosity index).

	Male Model			Female Model	
Living standard	/	/	/	/	/
Religiosity	/	/	/	/	/
Length of the workday	−0.025 (−0.88)			−0.020 (−0.72)	
Female earning capacity	0.003 (0.56)		0.008 * (2.31)	0.003 (0.65)	
Work-time arrangements	0.017 ** (5.51)			0.016 ** (5.39)	0.008 * (2.44)
Childcare of kindergarten children		−0.003 (−1.23)			−0.003 (−1.24)
Childcare for pre-kindergarten children		0.015 ** (6.15)	0.009 ** (4.18)		0.014 ** (5.34) 0.008 ** (3.32)
Maternal leave arrangements		0.000 (0.45)			0.001 (0.95)
Paternal leave arrangements		−0.003 (−0.89)			−0.001 (−0.24)
N	7.483	7.483	7.483	9.360	9.360
rho1	0.0716	0.0513	0.046	0.0656	0.0551
var_u1	0.0277	0.0194	0.017	0.0266	0.022
var_sum	0.388	0.379	0.377	0.405	0.401
chi2	340	371	382	554	569
aic	13.734	13.726	13.720	17.625	17.622
bic	13.900	13.899	13.879	17.796	17.800
ll	−6.843	−6.838	−6.837	−8.788	−8.786

Note: This model was calculated without including activity status on the micro-level. No significant changes arose when including it. Confidence levels: p/z<0.05; \* p/z<0.001. In bold: significant effects.

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