

**Homemaker or Breadwinner? A cross-sectional analysis of parental
leave policies and their impact on gender role attitudes across
European countries.**



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Abstract

Despite the widespread increase in female labour force participation, gender role attitudes towards the gendered division of labour remain diversified with stark variations across Europe. Given the significance of parental leave policies in shaping the division of labour between parents, this study examines how parental leave policies influence the formation of gender role attitudes across Europe. Drawing on time series, cross-sectional data from the European Value Study (EVS), and the Organisation for Economic Co-operation and Development (OECD) family database, I study the effects of three parental leave design dimensions, (1) duration, (2) compensation, and (3) flexibility across countries and across time (1990-2017). The results suggest that an increase in the duration of parental leave for fathers as well as a flexible parental leave design that allows parents to split the parental leave have both a strong and positive effect on the formation of egalitarian gender role attitudes. However, an increase in the duration of parental leave for mothers carries a negative effect on the formation of egalitarian gender role attitudes. Further, this study points towards a new emerging cleavage across European countries with some moving further towards a dual-earner model and others reversing the egalitarian advancements and resorting to a more traditional gendered division of labour. The broad perspective on cross-country differences as well as the usage of new evidence on gender role attitudes gives new insights on the debate over the relationship between macro-level policies and their impact through policy feedback on micro-level gender role attitudes.

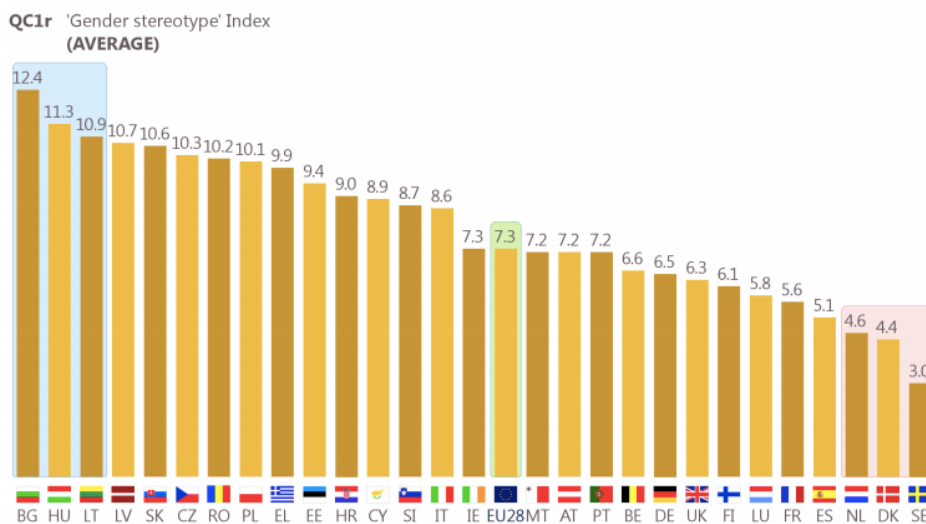
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1. Introduction

The last 30 years have brought consequential changes to gender relations and the division of labour. While in the 1990s female labour force participation was on average at 39.9% across Europe, it increased to over 66.6% in 2020 (International Labour Organisation, 2021) indicating a shift away from the traditional male breadwinner model and its gendered division of labour towards a dual-earner model in which both men and women contribute to the household income (Lewis, 2001; Orloff, 2006; Leira and Saraceno, 2008; Daly, 2011). Although most research agrees that there has been a move towards a more acceptable view of women entering the labour market (Scott et al., 1996; Gubernskaya, 2010; Treas et al., 2014), the shift in gender role attitudes has not occurred equally across Europe (Knudsen and Wærness, 2001). Bulgaria (12.4) and Hungary (11.3), for example, score relatively high on the traditional gender stereotype index by the European Commission (2017) in Figure 1 indicating a stronger agreement with gendered stereotypes towards the traditional gendered division of labour between men and women, whereas countries such as Denmark (4.4) and Sweden (3.0), score relatively low.

Figure 1: Gender Stereotype Index 2017 (European Commission, 2017: 17)



Note: Gender Stereotype Index records the average % of respondents to hold traditional gender stereotypes towards the division of labour between men and women.

The stark variation in gender role attitudes is especially puzzling since all European

countries have experienced a similar economic development and thus faced similar effects of de-industrialisation (Tregenna, 2008) and the need for women to enter the labour market (Mah, 2012).

While existing research seeking to explain the variation in gender-role attitudes has focused on both macro-level (economic growth, inequality, religion) (Crompton et al, 2005; Wilensky, 2002) and micro-level (age, sex, education) factors (Thebaud and Pedullay 2015; Hook and Peak, 2020), only a small body of literature has examined the impact of policies on the formation of gender role attitudes (Sjöberg, 2004; Andre et al., 2012; Lomazzi et al., 2018). As a result, the literature on gender role attitudes has been confined to country-specific historical and demographic factors and, therefore mostly neglected the importance of policy feedback stemming from macro-level policies influencing the formation of gender role attitudes towards the gendered division of labour.

This research gap is of crucial importance especially in the context of parental leave policies, as they aim to support parents in their endeavour to reconcile work with family life. Since the outlook of family policies has changed rapidly in the last decades (Bonoli, 2005; Lewis and Giullari, 2005; Fleckenstein, 2011), European governments have the ability to strategically use parental leave allowances to either support or block the loosening of the traditional gender division of labour and to thus actively shape the normative context in which public attitudes towards gender roles are formed.

The following thesis aims to fill this gap by looking at different parental leave policies that have been adopted across Europe over the span of the last 30 years, and by examining their impact on gender role attitudes towards the gendered division of labour. Thus, it seeks to answer the following research question:

What are the effects of parental leave policies on gender role attitudes towards the gendered division of labour across European countries over the last 30 years?

The question will be answered by performing a multilevel ordinary least squares (OLS) regression analysis using data from the repeated cross-sectional European Value Study for 22 European countries in 1990, 1999, 2008, and 2017. Together with parental

leave data from the OECD Family database and the Prospered Research Institute, the study offers new evidence and explanations for the observed cross-country variation of gender role attitudes regarding the gendered division of labour. It thus not only adds to the gender role literature by providing a deeper understanding of the formation of gender role attitudes but also contributes to the current literature on parental leave policies and their broader impact on gender equality within the framework of policy feedback.

The thesis proceeds as follows: Chapter 2 reviews the current literature on the topics of female labour force participation, gender role attitudes, and the role of parental leave policies, before Chapter 3 sets out the theoretical background and embeds the research within the concept of policy feedback. Chapter 4 then outlines the research design, methodology, and data, succeeded by a discussion of the main empirical findings in Chapter 5. Chapter 6 concludes, points towards important limitations, and offers an outlook on potential further research.

2. Literature Review

2.1 Increase in Female Labour Force Participation

One of the main drivers of the change in century-long established gender relations is the increase in female labour force participation and the weakening of the boundaries between the female-dominated private sphere and the male-dominated public sphere (Jaumotte, 2003; Strangleman and Rhodes, 2014). Research on female labour force participation has identified the process of de-industrialisation which started in the 1970s and was characterised by a steady decline in manufacturing employment as the catalyst for such drastic change (Bluestone and Harrison, 1982; Johnson, 2002; Tregenna, 2008; Mah, 2012). The structural change towards a knowledge-service based economy resulted in wage restraint as well as in an increase in structural unemployment among the traditional male wage earners driving more women out of the traditional private sphere and into the labour market (Jaumotte, 2003; Vitali and Arpino, 2016; Choudhry and Elhorst, 2018). Next to this need to restore the lost male breadwinner household income, research has identified improved female education (Becker, 1974; Eckstein and Lipshitz, 2011; Esping-Andersen and Billari, 2015), changes in fertility (Heckman, 1974; Bernhard, 1993; Bailey, 2006) and a cultural shift (Pleck, 1997; Brewster and Padavic, 2000) as the causes of the increase in female labour force participation.

The findings are thus consistent with the Gender Revolution theory which suggests that the increase in female labour force participation can be traced back to the first half of the gender revolution during the 1960s in which women were less frequently bound to their home and able to enter into the public sphere which subsequently challenged the strict gender division of labour, and reversed the gender segregation into private and public sphere that had emerged during industrialisation (Goldscheider et al., 2015; Stanfors and Goldscheider, 2017). The second half of the gender revolution is defined as the increase of men's involvement in the private sphere taking on childcaring and household tasks which, although strongly debated (Bianchi, 2011; Cotter et al., 2011; England, 2010), is seen to be currently taking place (Goldscheider et al., 2015). Data from longitudinal studies in the United States, for example, suggest that both fathers and mothers have increased their time spent on child-care with increases in father's involvement being strongest among the highly educated

(Altintas, 2016; Craig et al., 2014, Sullivan et al., 2014) showing signs of gender convergence in house and care work (Bianchi et al., 2006). However, other research has also argued that the gender revolution is about to stall with women mainly entering the labour market as a second earner, working part-time (Morgan, 2009) receiving substantially lower wages (Crompton, 1999; Gornick and Meyers, 2008; Cha and Weeden, 2014), and men having not increased their share of unpaid housework to the same extent as women have their share of paid work (Bianchi, 2011; Taylor and Scott, 2018). This has often resulted in women having to bear a 'double burden' of participating in the labour market while at the same time doing the same amount of unpaid work at home as previously (Hooff, 2011; Cunha et al., 2014). Those findings suggest that the gender revolution has only occurred under certain circumstances and has not taken place equally across all demographic and socio-economic sectors (England, 2010; Cotter et al., 2011; Raley, et al., 2012). Moreover, researchers have argued that while the structural factors have changed, public attitudes towards gender norms in society have not changed to the same extent thus hindering the completion of the second part of the gender revolution (England, 2010; Cotter et al., 2011).

The Second Demographic Transitions (SDT) theory, on the other hand, pinpoints the root of the increase in female labour force participation to the economic growth during the 1860s until the 1960s which improved the living conditions of most European countries and which ultimately gave rise to higher-order needs including 'self-actualisation', 'individual autonomy', and 'a claim for recognition for their realisation'. (Lesthaeghe, 2014, p.18114). Thus, the relatively high economic growth and improved living standards achieved at the peak of the 1960s led to women being free enough to realise their higher-order needs instead of being bound to the home and prioritising the collective family needs. The SDT theory is often used to explain the shift in cultural attitudes towards the increase in female labour force participation which ultimately provided women with greater autonomy over their life and improved status in society (Choudhry and Elhorst, 2017; Hobson, 2004). Although the SDT theory does not clarify to what extent the cultural attitudes have changed, it stands in sharp contrast to the studies on the gender revolution theory arguing that public attitudes have not changed enough thus stalling the second revolution.

As a result, there is no consensus in the current literature as to what extent public attitudes towards gender roles have changed or are able to change thus opening up space for further research on factors that shape and influence gender role attitudes.

2.2. Gender Role Attitudes

Gender role attitudes are usually defined as “beliefs about the appropriate role activities for women and men” (McHugh and Frieze, 1997, p.4). These attitudes fall on a spectrum ranging from traditional attitudes on one end to egalitarian attitudes on the other. This study follows Amato and Booth (1995)’s definition and their distinction between traditional attitudes that involve a strict gender division of labour with a ‘husband-breadwinner’ and a ‘wife-homemaker’ (p.58), and egalitarian attitudes that promote shared responsibilities among men and women in both the private and public sphere of life. Therefore, gender role attitudes are understood here as either traditional following the *traditional* gendered division of labour or *egalitarian* promoting female labour force participation and shared care and housework responsibilities among men and women.

Previous research on the differences in gender role attitudes identified several demographic factors as explanations for the variation across *individuals* and their perceptions of the gendered division of labour. Apparalla et al. (2003), for example, point out that a younger, less religious, and female person is more likely to express egalitarian attitudes as opposed to an older, more religious, and male person.

Similarly, Thebaud and Pedullay (2016) found that men are less receptive than women to change their gender role attitudes towards a more egalitarian view of the division of labour since most men still see women as the main carer and thus consider the problem of reconciling paid work with caring responsibilities as a female problem rather than a shared obligation (Duvander, 2014; Padvaic et al. 2013).

Next to age, sex, and religion, the level of education has been proven to be a strong factor in explaining the variation in gender role attitudes across individuals. Esping-Andersen and Billary (2015) find that the more educated and better employed a person is the more likely is the formation of gender egalitarian attitudes towards women’s employment. The effect of increased education and better employment on egalitarian gender norms was strong for both men and women, yet stronger for women

indicating that the more educated (Esping-Andersen and Billari, 2015; Goldscheider et al., 2015) and financially independent (Baxter and Kane, 1995) a woman is, the more likely it is that she favours the loosening of the gendered division of labour.

Additionally, the number of children has proven to increase the elasticity of female labour supply (Jaumotte, 2003), whereby the opportunity cost for women to work in the labour market increases. Therefore, studies have observed that parents of multiple children are more likely to choose a traditional gendered division of labour and are thus also more likely to hold traditional gender role beliefs.

Besides micro-level factors, research has focused on macro-level factors that seek to explain the variation of gender role attitudes across *countries*. One of the main explanations is centred around the level of the gross domestic product (GDP) indicating that a higher level of economic output and thus a higher standard of living is positively related to egalitarian gender attitudes (Wilensky, 2002). It thus lends support to the SDT theory in which economic growth enabled the diffusion of the gendered segregation of labour. Further, Crompton et al. (2005), Sjöberg (2004), and Sundström (1999) find that in countries with a generally higher gender equality index individuals held more egalitarian gender role attitudes as compared to countries with lower overall gender equality.

And lastly, Sjöberg (2004) and Edlund and Öun (2016) found that the greater the influence of the Catholic church had been on the policy-making process in the past the more likely are policies that reinforce a traditional gendered division of labour. Especially the extent to which religion had been institutionalised determined to a great extent whether governments adopted traditional or egalitarian family policies (Bahle, 2008). Examples include continental European welfare states that followed the male breadwinner model such as Germany and France. In that type of welfare state, mothers were primarily seen as caregivers and not as members of the labour force (Robila, 2012; Saxonberg and Sirovatka, 2006; Edlund and Öun, 2016), thus shaping the formation of gender norms towards the traditional gendered division of labour. In Nordic welfare states, on the other hand, in which the influence of the Church was less prominent and less institutionalised, women were more likely to engage in the labour market and thus to demand policies that reinforce a dual-earner family model (Edlund and Öun, 2016),

These findings are also in line with the study by Bolzendahl & Myres (2004) which found that the longer a society had been exposed to egalitarian views on gender roles, the more acceptable are public attitudes towards women in the labour market. However, they also find that even in secular countries there remain important biases towards the caring role for children with women being perceived as the main carer (Bolzendahl and Myres, 2004). This finding reflects the outcomes of the above-mentioned studies conducted by Hooff (2011) and Cunha et al. (2014), in which women were increasingly faced with a double burden, working in the labour market but also taking care of the children at home.

2.3 Parental Leave Policies

While a lot of research effort has been put into examining macro- and micro-level factors, less attention has been paid to the different policies across countries and their impact on shaping gender role attitudes. This is especially applicable to the context of family policies and parental leave allowances that aim to support parents in combining paid work with unpaid household responsibilities. Literature on leave policies commonly defines parental leave as an “employment-protected leave of absence for employed parents” (OECD, 2019, p. 1), which “allows them to take care of an infant or young child over a set period of time” (Addati et al., 2014, p.60). Thus, by enabling or disabling mothers and fathers to take time out of the labour market to spend it with their children, parental leave regulations have the ability to directly influence the division of paid and unpaid labour (Sundström and Duvander, 2002). Hence, parental leave policies establish norms that reflect the accepted societal behaviour of men and women on which then individual gender role attitudes are formed.

While the two primary goals of parental leaves policies are (1) enabling parents to combine family obligations with paid work and (2) allowing women to participate in the labour market and to increase the overall female labour force participation (Edlund and Öun, 2016), other research has also identified secondary policy goals which include the reduction of financial stress (Ray et al., 2010), the avoidance of an interruption in the career path of women – helping them to advance in the workplace (Haas, 2003), and the encouragement of fathers to be involved in childcare thus promoting egalitarian parenting (Nepomnyashy and Waldfogel, 2007).

Due to this last function of promoting egalitarian household responsibility outcomes, research has suggested that parental leave policies can be seen as egalitarian policy tools that can advance the second half of the gender revolution (Sundström and Duvander, 2002). However, there is no consensus in the current literature whether parental leave policies have actually had the intended effect of promoting gender equality in the labour market and at home since many parental leave policies are still designed to rather cater to the needs of mothers thus granting none or only limited time to fathers of newborn children.

While studies such as Tanaka and Waldfogel (1997) have found that parental leave policies are positively linked to improved job continuity of mothers and a reduction of gender wage gaps, Gupta et al. (2006) find that there continues to be gendered discrimination in the labour market disadvantaging women in the hiring process. This occurs mostly in countries where the duration of parental leave is very high for women but very low for men thus encouraging employers to favor men over women as they do not have to grant parental leave to them. Moreover, extensive parental leave schemes for mothers have the potential to undermine the labour market position of women, as it becomes harder to re-enter the labour market after an extensive break (Pettit and Hook, 2005).

Similarly, Ferrarini (2003) and Korpi (2000) have examined the impact of leave allowances on gender role attitudes and found that low, flat-rate benefits combined with a long duration of maternal leave increase traditional gender role attitudes and the favouring of a gendered division of labour. Building on this finding, Sjöberg (2004) has studied the effect of dual-earner welfare models on egalitarian public attitudes and has found a strong positive effect suggesting that parental leave policies designed for both fathers and mothers can transform public attitudes towards a more egalitarian view. Hence, a reduction in maternal leave allowances and an increase in paternity leave constitute a potential egalitarian policy strategy for governments.

However, Andre et al (2012) have found that while an increase in female labour force participation has a negative effect on traditional gender role attitudes, government expenditure on childcare does not decrease traditional gender role attitudes suggesting that direct parental leave allowances have a stronger effect on gender role attitudes than indirect family policies such as childcare. In contrast, Lomazzi et al. (2018) have

examined workplace arrangements together with family policies and their impact on egalitarian gender role attitudes and have found that in addition to egalitarian family policies, a flexible work schedule facilitates a positive shift towards egalitarian gender role attitudes pointing towards the importance of the nexus between government policies and internal company arrangements.

While the above studies show that macro-level family policies can indeed impact the formation of gender role attitudes, the studies have mainly relied on composite scores that aggregate the differing dimensions of family policies and thus do not report on individual policies. Further, previous research assumed a uniform contextual effect on individual gender role formation and thus mostly neglected to additionally control for individual micro-level characteristics. By focusing on parental leave policies and their design features pertaining to the (1) duration, (2) compensation, and (3) flexibility, this thesis hopes to add to the literature and to give a more comprehensive account of the formation of gender role attitudes while controlling for both micro-level characteristics and macro-level factors.

The focus on parental leave policies is also intriguing, because of its relevance to the broader welfare state change. Since the 1990s, most European welfare states increased their parental leave provisions indicating a shift away from the neoliberal welfare state model of reconciliation towards a social investment approach that prioritises the smoothing of important life transitions especially for mothers and fathers moving out of the labour market to parenthood. By providing parents with the opportunity to take time out of the labour market and to care for their newly born children, welfare states support parents in their life decision to have children (flow), encourage the care and education of children, the future human capital of the country (stock), and ensure financial stability during the time not spent in the labour market (buffer). Thus, parental leave policies form an important part of the social investment paradigm and its three core dimensions of (1) flow, (2) stock, and (3) buffer to which most European welfare states are currently moving to (Hemerijck, 2018).

Investigating how parental leave policies impact gender role attitudes thus also feeds into other pressing welfare issues such as gender equality, economic efficiency including the activation of the labour force (Gingrich and Ansell, 2015) in order to tackle the problem of an ageing population and the risk of old-age poverty.

3. Theoretical Framework

3.1 Policy Feedback Theory

Given the main research focus on the impact of macro-level policies on micro-level gender role attitudes, the study is grounded within the broader policy feedback literature which states that macro-level policies have the capacity to alter public opinions within a society.

The policy feedback theory was first extensively used by March and Olsen (2006), Pierson (1993), and Rothstein (1998) who worked within the neo-institutionalist school, and analysed how past policies can feed back into the political system and influence future policies and politics. Later the theory had been more widely used to analyse the impact of policies on public attitudes of ordinary citizens as well.

The causal mechanisms in policy feedback are usually twofold. One is ‘the *adaption*’ of the public to ‘institutionalised realities’ (Kumlin and Stadelmann-Steffen, 2014, p.6), which implies that citizens operate within a given framework of policies. Applied to the context of parental leave policies this means that citizens adjust their normative view on the division of labour between mother and father based on what parental leave allowances are granted to them. If the duration of parental leave is very long for mothers but short or non-existent for fathers, citizens adapt to the institutionalised reality and are more likely to form a traditional gender role attitude with the mother being the prime carer in the private sphere and the father the main earner in the labour market. Therefore, parental leave policies and their design provide the context in which individual behaviour is possible and in which preferences and perceptions can be formed (Mettler and Soss, 2004; Soss and Schram, 2007; Svallfors, 2007). This in turn also impacts the opportunity structure of individuals whether or not to take part in paid work in the labour market or not. And thus, ultimately give rise to a certain collection of norms regarding the desirable role of men and women in society and the division of labour.

The second causal mechanism by which macro-level policies can impact the formation of micro-level attitudes is the ability of policies to structure the ‘*material interests*’ of citizens (Kumling and Stadelmann,2014,p.6). If a welfare state, for example, grants all its citizens both fathers and mothers parental leave, citizens are more

likely to develop a material interest in wanting to use parental leave. Thus, granting parental leave to fathers can trigger the material need for fathers to engage in the caring role for children and thus manifest more egalitarian attitudes towards the division of labour. However, research has also shown that the more visible these policies are the stronger the impact on political cleavages and public attitudes (Gangl and Ziefle, 2015). This means direct policies such as the granting of parental leave allowances are more likely to impact micro-level attitudes in one of the two ways as described above, as compared to indirect policies such as tax breaks (Campbell, 2012; Gangl and Ziefle, 2015).

Taken together, this study assumes that the design of family policies may influence people's ideas about the proper and desirable behaviour of men and women in society and, therefore, seeks to analyse the mechanisms through which the cross-country variation in parental leave design intersects with individual-level gender role attitudes.

3.2 Hypotheses

Since parental leave policies constitute an important family policy element that can constrain or enable parents to reconcile work and unpaid care-/ housework as well as create a normative framework which influences people's behaviour and attitudes, the question arises to what extent those cross-country differences in attitudes towards gender roles can be explained by the different design structures of parental leave policies.

Following this reasoning, I expect that differences in the design structure of the parental leave policies namely the (1) duration, (2) compensation, and (3) flexibility across countries have had an impact on the cross-country differences of public attitudes towards gender roles. The duration of the parental leave scheme refers to the time that is available to mothers and fathers respectively. Financial compensation refers to the percentage of income that is covered as compared to the income that would be obtained in the labour market. And lastly, flexibility refers to the ability of parents to split the parental leave and to transfer leave from one parent to the other.

(1) Duration

As pointed out in previous literature, the duration of parental leave policies for mothers can also have negative effects on labour market outcomes, as mothers are missing out on important labour market skills and employers might discriminate against hiring women, since they have to expect to cover a potential long parental leave (Pettit and Hook, 2005). Similarly, a long parental leave for mothers indicates that the main caring role still lies with the mother thus creating a traditional gender role context (Gupta et al., 2006). In contrast, the greater the duration of the parental leave policy for fathers, the more likely it is that the main caring role for the mother diminishes and that the policies create a context in which parental leave policies for fathers are perceived as normal and socially desirable. Therefore, the study tests the following hypotheses:

H1.1: The greater the duration of the parental leave policy for mothers, the more likely is a decrease in egalitarian gender role attitudes.

H1.2: The greater the duration of the parental leave policy for fathers, the more likely is an increase in egalitarian gender role attitudes.

(2) Compensation

In terms of the compensation design of parental leave policies, I expect that both parental leave policies for mothers and fathers are equally likely to change attitudes towards egalitarian gender roles, as high compensation schemes recognise the role of men *and* women in the labour market (Ferrarini, 2003; Korpi, 2000)

Therefore, the study tests the following hypothesis:

H2: The greater the compensation of the parental leave policy, the more likely is an increase in egalitarian gender role attitudes.

(3) Flexibility

The expected result for the flexibility component of parental leave schemes is a positive effect since greater flexibility might increase the transfer of leave to fathers and thus facilitate an increase in egalitarian views of gender roles.

Therefore, the study tests the following hypothesis:

H3: The greater the flexibility of the parental leave policy, the more likely is an increase in egalitarian gender role attitudes

4. Methodology and Data

4.1. Research Design

In order to examine the impact of parental leave policies on gender role attitudes, I use a time-series, cross-sectional research design covering 22 European countries. The analysis is conducted with the help of a two-stage OLS method using country-level data from 1990 until 2017. Using a comparative statistical research design with the country-year as the unit of analysis allows to not only identify the differences and similarities in parental leave policy designs across Europe but to also contrast the varying impact of such on the formation of gender role attitudes across multiple years. Further, the introduction of a time-series dimension results in an increase in sample size thus generating a higher statistical heterogeneity which yields higher statistical power to my findings.

This study, therefore, qualifies as a medium-n statistical analysis which has the advantage to provide generalisable conclusions across different welfare regime types while at the same time preserving the contextual factors unique to the European continent. By striking this balance between generalisability and individual country specific factors, the study seeks to provide a deeper understanding of parental leave policies as egalitarian policy tools that have the ability to alter public attitudes while holding individual (micro) and country specific (macro) factors constant.

The focus is on European countries because they have experienced a similar economic and social development and together classify as high-income economies (World Bank, 2021). Consequently, all countries have experienced some form of de-industrialisation which is, as literature has pointed out, important for the shift of female labour force participation to occur and to create the need for governments to introduce family policies that aim to support parents in their reconciliation of work and family life. Moreover, all countries have been exposed to the shift away from the neoliberal family policy paradigm towards a social investment paradigm that has started to occur over the last 30 years. Therefore, the study uses cross-sectional and time-series data to not only capture the variation across countries but also across the crucial time period in which family policies including parental leave policies were able to evolve and ultimately shift away from the traditional male-breadwinner model.

4.2 Data

4.2.1 Dependent Variable

Data for the dependent variable in the study comes from the European Values Study which is a repeated cross-sectional survey used to measure the public attitudes of citizens in Europe. The study will be using data from the four most recent waves, (1) 1990, (2) 1999, (3) 2008, and (4) 2017. The survey has been conducted in over 47 European countries with around 1000 survey participants respectively. However, not all countries were included in all four waves whereby the sample size had to be reduced to 22 European countries: Austria, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom (UK). Although there were missing data points for Austria and Norway in the 1999 wave, by using four different time periods the total number of cases n in this study could be increased to 86.

In order to successfully operationalise the concept of gender role attitudes, the analysis focuses on the main dimension of changing gender relations namely the gendered division of labour into private and public sphere. By utilising two survey questions from the EVS core questionnaire on family and gender attitudes, the study captures the attitudes towards women's caring responsibilities in the *private* home (captured by Q1 below) and the attitudes towards women's role in the *public* labour market (captured by Q2.1 and Q2.2 below). The questions were worded the same in all four waves, with the exception of the second question (Q2.2) which was worded slightly differently in the last wave of 2017.

Q1: A job is alright but what most women really want is a home and children.

Q2.1: Both the husband and wife should contribute to the household income.

Q2.2: A man's job is to earn money a woman's job is it to look after the home and family.

The responses were recorded with the help of a four-point Likert (1932) scale that allows participants to express their attitudes in how strongly they agree or disagree with the statements above. The scale was coded as (1) Strongly agree, (2) Agree, (3) Disagree, and (4) Strongly disagree. Since gender role attitudes have been conceptualised in the literature as ranging from traditional to egalitarian (Amato and Booth, 1995) the more a person disagreed with Q1 and agreed with Q2.1, disagreed with Q2.2, the higher the score on egalitarian gender role attitudes thus supporting a loosening of the traditional gendered division of labour.

4.2.2 Independent Variable

Macro-level data on parental leave comes from the OECD Family Database which records the duration and flexibility of parental leave allowances, as well as from the Prospered Research Institute which record data on the compensation of parental leave policies. The independent variable is operationalised by using separate indicators for each design dimension, (1) duration, (2) compensation, and (3) flexibility.

The data on the duration is measured in weeks and is divided into leave exclusively for mothers and leave exclusively for fathers. Importantly, however, as mentioned above, parental leave designs vary greatly across Europe with some countries incorporating maternity/paternity leave within parental leave or providing parental leave as an additional separate leave following the maternity/paternity leave. Due to this stark variation in design and the different understanding of parental leave in individual countries, it is not possible to collect data that solely measures parental leave. Therefore, in order to capture all parental leave that is available to either parent regardless of the terminology used in a country, the study operationalises the concept of parental leave duration as the overall leave that is available to mothers (maternity + parental) and the overall leave that is available to fathers (paternity + parental).

Data on the compensation dimension measures the minimum replacement rate of the wage in percentage ranging from 0% to 100%. This is an important dimension, since this study solely focuses on paid parental leave that includes some form of monetary compensation. The variable is coded into three categories, (1) low compensation (25-64%), medium compensation (65%-84%), and high compensation (85%-100%).

Lastly, the flexibility dimension of parental leave is measured with the help of a dummy variable indicating whether a transfer of the leave between parents is possible, coded as 1, or not, coded as 0.

4.3 Methodology

The models are estimated using a two-stage statistical OLS multiple regression. OLS multiple regression is the preferred analytic technique when modelling a single response variable on an interval scale against multiple predictor variables. By calculating a line of best fit, the regression parameters β indicate the change in the dependent variable Y that is associated with a unit change in the explanatory variables X_i (Hutcheson, 2011).

Based on the aforementioned findings in public attitudes literature and the policy feedback theory, I assume that gender role attitudes are conditioned by factors from within the country (individual characteristics) and across countries (design of parental leave policies).

Thus, micro-level data on gender role attitudes is assumed to be nested within macro-level data on parental leave policies, which in turn requires a two-stage multilevel regression model that uses the stage I β_0 coefficient to create a new dependent variable for stage II (Bernadi and Ballarino, 2014; Buttler, 2019). Therefore, the analysis is divided into two stages: Stage I controls for micro-level factors and regresses demographic factors onto gender role attitudes for each country separately. After applying a weighted inverse variance to the intercept coefficient of each regression to extract the impact of micro-level factors, Stage II regresses the main explanatory variable parental leave onto the weighted intercept coefficient while controlling for other macro-level factors. Additionally, the stage II regression uses a hierarchical entry method to identify the relative predictive power of each parental leave dimension.

4.3.1 Descriptive Statistics

Before beginning the individual regression analyses, I recode the responses of all three survey questions so that a higher value indicates a more egalitarian view towards gender roles. However, since the coefficients of attitudes scales are usually non-intuitive and thus difficult to compare across countries, it is useful to rescale the variables so that they have a standard unit of measurement. Therefore, I standardised the three survey

response variables individually and pool them subsequently together before standardising the resulting variable again. This is done with the help of the following equation:

$$Z_Y = \frac{Y_{ik} - \bar{Y}_k}{\sqrt{(sk)^2}}$$

In which Z_y is the standardised z-score with a mean of 0 and a standard deviation of 1. By doing so, I can account for any measurement variation across the four-time periods, since the standardised variable now conceptually measures the magnitude of an observation's score relative to the population score.

4.3.2 Stage I Regression

In Stage I, I regress public attitudes onto individual characteristics. For each country, a multivariable regression model is applied in order to adjust for micro-level factors that literature has shown to affect the formation of gender role attitudes. The covariates included in the regression are age (Apparalla et al., 2003), sex (Thebaud and Pedullay, 2016; Duvander, 2014), religion (Apparalla et al., 2003), children (Jaumotte, 2003), education (Esping-Andersen and Billari, 2015; Goldscheider et al., 2015), marital status (Padavaic et al., 2013), and employment (Baxter and Kane, 1995; Esping-Andersen and Billari, 2015; Goldscheider et al., 2015).

The variables *age* and *education* are measured on a continuous scale ranging from 16-108 on which education is measured by the age the respondents had completed their education. Variables measuring religion, marital status, the number of children, and employment are included as categorical variables. *Religion* is measured along 4 categories (1=very important, 2=quite important, 3=not important, and 4=not at all important). *Marital status* has 6 categories (1=married, 2=living as married, 3=divorced, 4=separated, 5= widowed, and 6=single). *Children* has 7 categories ranging from 0 (no child) to 6 (6 children and more), and *employment* has 7 categories (1=employed >30 hours, 2= employed <30 hours, 3=self-employed, 4=retired, 5=housewife, 6=student, 7=unemployed). Lastly, I include *sex* as a dummy with 0 indicating a male and 1 indicating a female respondent. The dependent variable for each regression model is the

standardised survey variable. To account for additional factors not captured by the covariates, I also include a random error term ε .

$$Y_k = \beta_0 + \beta_1 \text{AGE} + \beta_2 \text{SEX} + \beta_3 \text{CHILDREN} + \beta_4 \text{RELIGION} + \beta_5 \text{EDUCATION} + \beta_6 \text{MARITALSTATUS} + \beta_7 \text{EMPLOYMENT} + \varepsilon_k$$

The regression is performed separately for each of the 22 countries in each survey year (excluding Austria and Norway in 1999) resulting in 86 linear OLS regressions. Table A.1 in the appendix reports the intercept coefficient and standard error for each regression.

After I have run the first stage regression for each country, I make use of the inverse variance-weighted average method (IVW) to calculate the average fixed effect of micro-level factors on public attitudes towards gender roles. The IVW method calculates the weighted mean of the effect sizes using the inverse variance of the intercept coefficient from each of the country regressions from stage 1 in order to give more weight to larger survey samples in stage 1. This is done by dividing the constant coefficient β_{0i} of each regression by the square root of its standard error ($1/SE^2$) and pooling the resulting effect estimate into a new dependent variable.

$$IVW = \frac{\sum \beta_{0i}(1/SE^2)}{\sum (1/SE^2)}$$

I use the constant coefficient of each regression because it represents the standard deviation value of gender role attitudes when all micro-level explanatory variables are at zero. Thus, I can effectively control for micro-level factors that influence the formation of gender role attitudes when analysing the impact of macro-level parental leave policies.

4.3.3 Stage II Regression

To analyse the impact of parental leave policies on gender role attitudes, I utilise the newly created dependent variable from Stage I. I then use a hierarchical entry method to regress the main independent variables duration for both father and mother,

compensation, and flexibility on the dependent variable. I also include two macro-level control variables: the gross domestic product per capita (GDP) and the gender inequality index (GII). Since previous literature has shown that countries with a higher level of economic output and a higher average living standard are more likely to support egalitarian gender norms (Wilensky, 2002), I control for the level of GDP per capita which is expressed in international thousand US dollar.

Besides GDP, literature has indicated that the higher the gender inequality in a country, the less likely is an egalitarian effect of parental leave policies on gender role attitudes (Crompton et al., 2005; Sjöberg, 2004; Sundström, 1999). Thus, I include the GII which is a composite index measuring the level of gender inequality present in a country based on three dimensions (1) female labour force participation as compared to male labour force participation, (2) female political representation, and (3) access to reproductive health. The GII is expressed on a scale from 0 to 1, where a higher value expresses a higher level of disparity between male and female human development and thus higher inequality.

The stage 2 regression is composed of four models with the following equations:

Model 1:

$$Y_k = \beta_0 + \beta_1 \text{PLMother} + \beta_2 \text{GDP} + \beta_3 \text{GII} + \varepsilon_k$$

Model 2:

$$Y_k = \beta_0 + \beta_1 \text{PLMother} + \beta_2 \text{PLFather} + \beta_3 \text{GDP} + \beta_4 \text{GII} + \varepsilon_k$$

Model 3:

$$Y_k = \beta_0 + \beta_1 \text{PLMother} + \beta_2 \text{PLFather} + \beta_3 \text{Compensation} + \beta_4 \text{GDP} + \beta_5 \text{GII} + \varepsilon_k$$

Model 4:

$$Y_k = \beta_0 + \beta_1 \text{PLMother} + \beta_2 \text{PLFather} + \beta_3 \text{Compensation} + \beta_4 \text{Flexibility} + \beta_5 \text{GDP} + \beta_6 \text{GII} + \varepsilon_k$$

In which Y_k is the weighted gender role attitudes from stage I, and ε_k the error term.

5. Analysis – Empirical results

5.1 Descriptive

Table 1. shows the mean distribution of the standardised survey variable across all 22 European countries for each survey year. Negative values mean a decrease in standard deviation from the mean and thus represent a move towards traditional gender role attitudes and positive values mean an increase in standard deviation from the mean and thus a move towards egalitarian gender role attitudes. The table reveals the stark variation of public gender attitudes across countries but also across time.

Table 1: Mean value of standardised survey variable by country and year
 Positive values = An increase in standard deviations from the mean thus an increase in egalitarian values
 Negative values = A decrease in standard deviations from the mean thus an increase in traditional values

Country	Mean 1990	Mean 1999	Mean 2008	Mean 2017
Austria	-0.263	.	0.099	0.212
Bulgaria	-0.518	-0.97	0.081	-0.685
Czech Republic	-0.145	0.014	-0.045	-0.622
Denmark	0.152	0.201	0.559	1.016
Estonia	-0.466	-0.211	-0.143	-0.239
Finland	0.010	-0.139	0.184	0.413
France	-0.198	-0.133	0.262	0.497
Germany	-0.149	0.120	0.333	0.492
Hungary	-0.299	-0.084	0.090	-0.276
Iceland	-0.485	-0.414	-0.161	0.606
Italy	-0.262	-0.268	-0.112	-0.157
Lithuania	-0.714	-0.407	-0.506	-0.725
The Netherlands	-0.630	-0.441	-0.413	0.630
Norway	-0.066	.	0.730	1.054
Poland	-0.456	-0.164	-0.140	-0.343
Portugal	0.302	0.085	0.111	0.024
Romania	-0.198	-0.312	-0.294	-0.538
Slovak Republic	-0.365	0.067	0.174	-0.670
Slovenia	-0.060	0.034	-0.034	0.003
Spain	-0.030	0.008	0.174	0.774
Sweden	0.252	0.501	0.470	1.027
UK	-0.184	-0.193	-0.115	0.337

When taking the mean value of the year 1990 as the baseline model, the following trends can be observed:

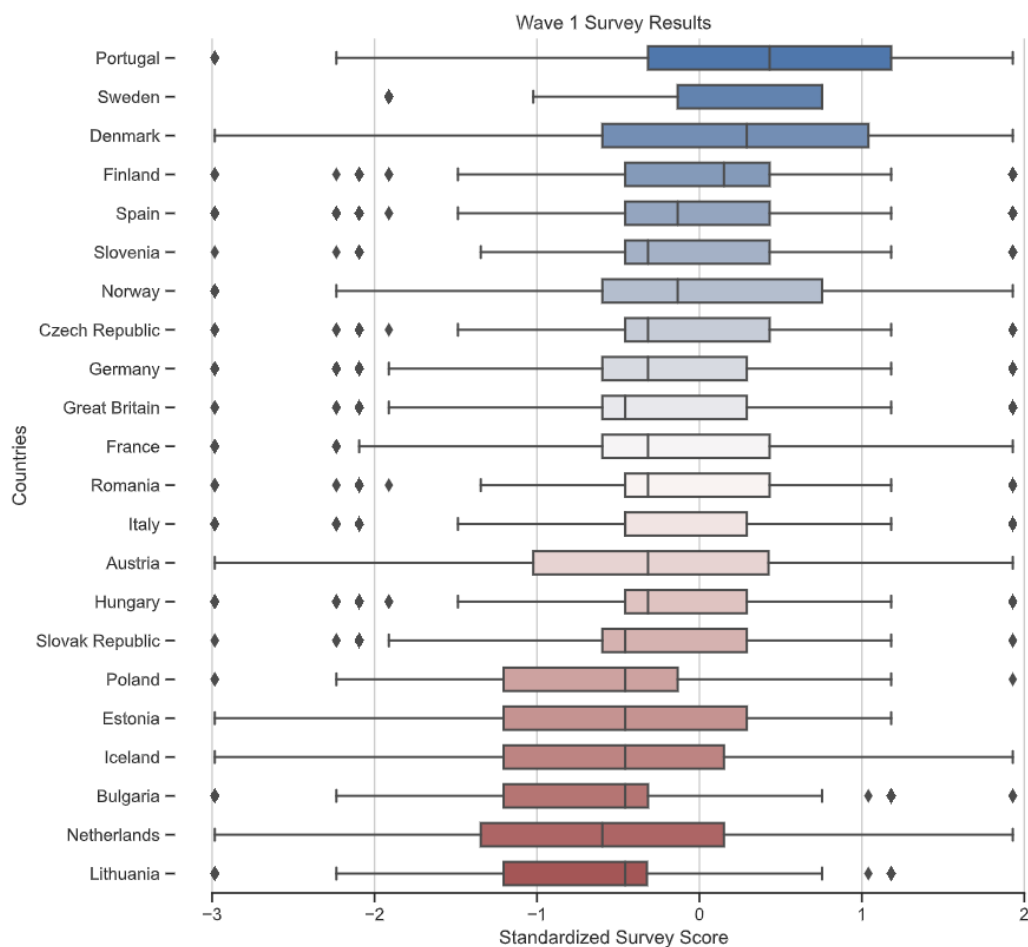
First, most countries have moved from traditional gender role attitudes in 1990 to egalitarian views in 2017, which is in line with the overall trend of increased female labour force participation and a move towards a dual-earner model that has been observed in developed countries over the last 30 years (Lewis, 2001; Orloff, 2006; Leira and Saraceno, 2008; Daly, 2011). Former traditional countries that have moved steadily towards more egalitarian views over the last 30 years include Austria, France, Germany, Iceland, the Netherlands, Norway, Slovenia, Spain, and the UK of which the Netherlands has experienced the highest overall change of 1.26 increase in SD followed by Norway (1.12) and Iceland (1.09).

Second, Denmark, Finland, and Sweden followed a similar trajectory, however, already held egalitarian views in 1990 and thus did not experience a transformation but rather a deepening of the already existing egalitarian gender role attitudes. This finding is again in line with previous research which has long identified the Nordic countries as vanguard welfare states which have departed from the male breadwinner trajectory as one of the firsts and employed a 'Scandinavian' egalitarian dual-earner model (Crompton, 1999; Orloff, 2006). Among those countries, Denmark has experienced the highest increase in egalitarian views with an overall difference of 0.86 SD.

Third, some countries with former traditional gender role attitudes have moved towards egalitarian views, however, since 2008 have experienced a return to traditional views. Although this trend is contrary to the linear shift towards more egalitarian views that had been predicted by the literature, Table 1 shows that it is observable in seven European countries including Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Poland, and Slovakia. Of those countries, Lithuania and Slovakia even report higher traditional gender role attitudes in 2017 (-0.73; -0.67) than in 1990 (-0.71; -0.37). These changes illustrate that the gender revolution and the overall trend towards a dual-earner model indeed is not a linear process and not occurring at the same rate across all European countries. This finding thus supports previous research that identified Eastern European states to predominantly support the traditional family model (Ciccia and Verloo, 2012).

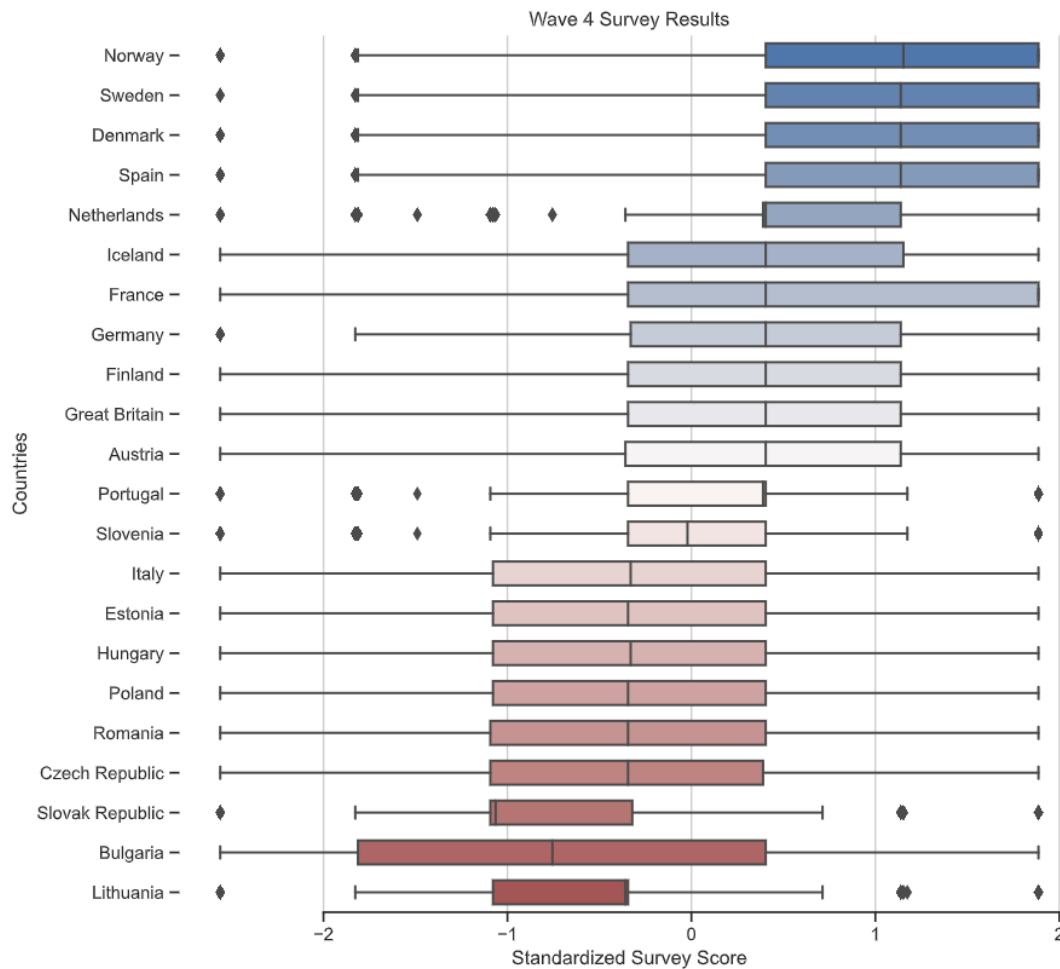
Further, data shows that the highest traditional gender role attitude score as well as the highest egalitarian gender role attitude score are both recorded in 2017 with Lithuania reporting a 0.73 SD decrease and Norway a 1.05 SD increase (figure 3). This finding suggests that in 2017, European countries are experiencing two opposing trends at the same time with some countries moving towards a dual-earner model and others moving back to a traditional gendered division of labour. The same trend can be illustrated when plotting the distribution of survey scores across countries in 1990 and in 2017.

Figure 2: Distribution of standardised survey score by Country Wave 1 (1990)



Note: Values plotted represent the standardised survey score of survey responses in EVS questions Q1 and Q2.1 across countries in Wave 1 (1990), with 95% confidence interval.

Figure 3: Distribution of standardised survey score by Country Wave 4 (2017)



Note: Values plotted represent the standardised survey score of survey responses in EVS questions Q1 and Q2.2 across countries in Wave 4 (2017), with 95% confidence interval

Figure 2. shows the distribution of the wave 1 survey scores in 1990. Looking at the 95% confidence interval and the interquartile range, one can observe a narrow distribution of scores with most countries scoring a mean in the negative (traditional gender role) spectrum, but close to 0.

When comparing the findings to the distribution of the wave 4 survey scores in Figure 3., one can observe a clear cleavage across countries with countries (blue) scoring a mean in the positive (egalitarian) spectrum, and others (red) scoring a mean in the negative (traditional) spectrum.¹ These findings are also supported by studies in the

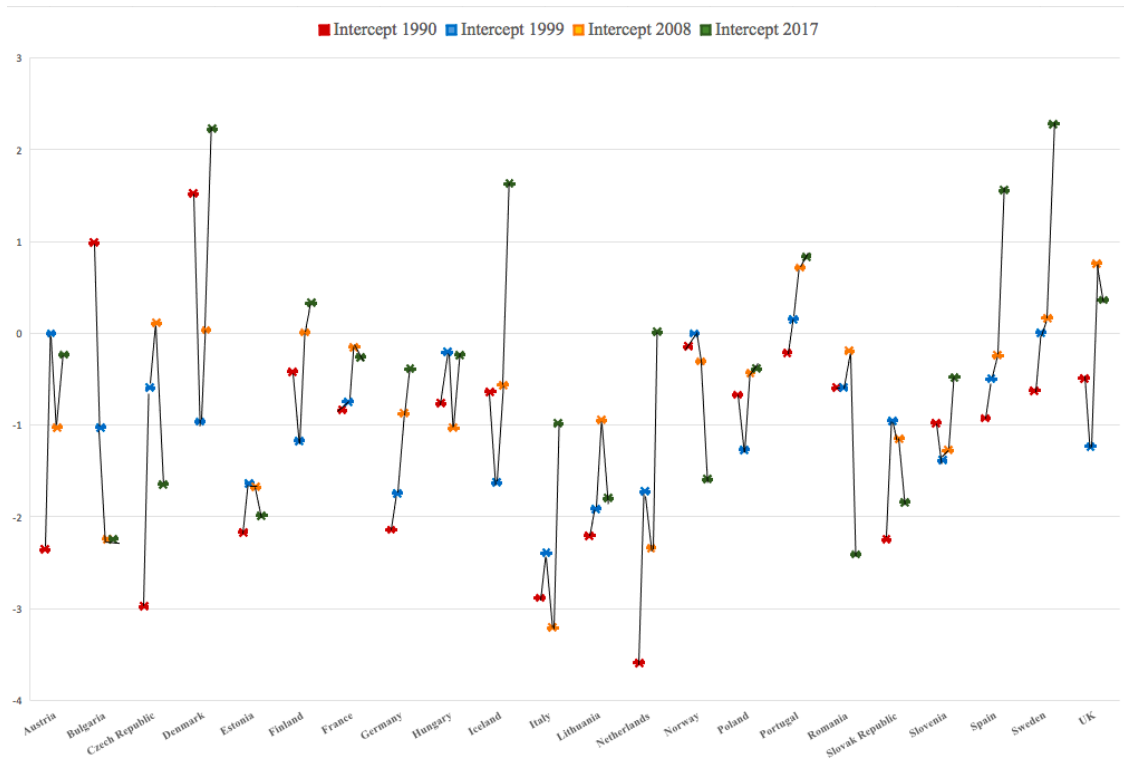
¹ The distribution of the standardised survey scores of *survey responses in EVS questions Q1 and Q2.1 across countries in Wave 2 (1999) and Wave 3 (2008)* with 95% confidence interval can be found in Figure A1. and A.2 in the Appendix.

literature that have found that in some countries a reversal of the dual-earner model and a move towards familism is observable (Daly, 2011). Overall, the results confirm the findings of the European Commission (2017) which indicate a variation in gender role attitudes across Europe and also across time.

5.2 Stage 1 Regression controlling for micro-level factors

When plotting the intercept coefficients for each regression after they have been weighted according to the IVM method, it becomes evident that the country variation remains persistent across Europe even after controlling for micro-level factors. Figure 4. shows the distribution of the IVM estimated intercept coefficient when controlling for micro-level factors.

Figure 4: The estimated coefficients for intercept by country and year when controlling for micro-level factors



Note: Values plotted represent the IVM estimated intercept coefficient β_0 for each country across four waves, 1990 (red), 1999(blue), 2008(yellow), and 2017 (green).

Together with low R^2 for the individual regressions ranging from 0.016 to 0.224, which are reported in Table A.1. in the appendix, the stark variations across time and across

countries indicate that there must be other macro-level country-specific factors that play a role in determining the formation of gender-role attitudes.

5.2 Stage 2 Results:

Having used a hierarchical multiple regression, Table 2 shows the effect of each parental leave design dimension on gender role attitudes across all European countries while controlling for GDP and GII.

Table 2: Regression Output of Second Stage Analysis - Macro Level Factors

Dependent Variable: Gender Role Attitudes	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Parental Leave Mothers	-0.003 (0.000)***	-0.003 (0.000)***	-0.002 (0.000)***	-0.004 (0.000)***
Parental Leave Fathers		0.023 (0.000)***	0.022 (0.001)***	0.017 (0.000)***
Compensation				
Low			0	0
Medium			0.257 (0.021)***	0.238 (0.021)***
High			0.421 (0.021)***	0.356 (0.021)***
Flexibility				
Not flexible				0
Flexible				0.323 (0.008)***
GDP	0.047 (0.000)***	0.043 (0.000)***	0.044 (0.000)***	0.042 (0.000)***
GII	0.898 (0.052)***	0.922 (0.052)***	1.031 (0.052)***	0.972 (0.052)***
Intercept	-2.119 (0.017)***	-2.088 (0.017)***	-2.548 (0.028)***	-2.489 (0.028)***
R ²	0.2864	0.2929	0.2971	0.3073
Adjusted R ²	0.2863	0.2929	0.2971	0.3073
Observations	86	86	86	86

Standard error in parentheses

***p<0.01, **p<0.05, *p<0.1

Model 1 shows that an increase in the duration of parental leave available to mothers by one week results in a 0.003 standard deviation decrease in egalitarian gender role attitudes towards the gendered division of labour holding GDP and GII constant. The finding indicates that increasing the duration of available leave to mothers reinforces the traditional gendered division of labour. This result reflects the findings of previous literature that extensive parental leave allowances for mothers strengthen the perception of women as being the main carer for children (Ferrarini, 2003; Korpi, 2000), give rise to discrimination against mothers in the labour market (Gupta et al., 2006), and thus also weaken the attachment of women to the labour market as re-entry becomes harder the longer a woman remains outside the labour market (Pettit and Hook, 2005). This effect is statistically significant at the 1% level with a p-value smaller than 0.001.

On the other hand, Model 2 shows that an increase in the duration of parental leave available to fathers by one week results in a 0.023 standard deviation increase in egalitarian gender role attitudes holding GDP, GII, and parental leave duration for mothers constant. The finding indicates that by offering parental leave to fathers, governments can create a context in which gender role attitudes are more likely to be formed in favour of an egalitarian dual-earner model (Sjöberg, 2004). The effect size is also statistically significant at the 1% level with a p-value smaller than 0.001.

Since both duration coefficients are measured on the same scale, it is possible to compare the effect sizes of both coefficients in Model 4 holding all control variables constant. The comparison shows that the total effect on egalitarian gender role attitudes is stronger when increasing the parental leave for fathers (+0.017) as compared to an increase for mothers (-0.004). This result shows that especially granting more parental leave to fathers can function as an egalitarian policy tool for governments (Ferrarini, 2003; Korpi, 2000; Sjöberg, 2004). The findings therefore not only confirm the initial hypotheses H1.1 and H1.2. but also carry important policy implications.

When adding the compensation dimension of parental leave policies into the model, as shown in model 3, both duration coefficients remain statistically significant. Further, the results show that offering a medium wage compensation (66-84%) as compared to a low compensation (25%-64%) increases egalitarian gender role attitudes by 0.257 standard deviations. Even higher compensation of 85% results in an increase of egalitarian gender role attitudes by 0.421 standard deviations as compared to low

compensation. Both effect sizes are statistically significant and support the initial hypothesis H2 which posits that a greater compensation for parental leave increases egalitarian gender role attitudes. This is because providing high compensation for both mothers and fathers, governments create a context in which both parents are equally seen to be the breadwinners and caretakers of the family needing to remain attached to the labour market as well as compensated for their time at home (Lomazzi et al., 2018).

Looking at the flexibility feature which had been added in model 4, one can observe a similar pattern as in model 3 which shows that if parental leave policies are flexible in design and thus transferable between either parent, egalitarian gender role attitudes increase by 0.323 standard deviations holding all other variables constant as compared to an inflexible design.

Overall, the findings support my hypotheses and can explain with an R^2 of 0.307 around 30,7% of the variance in the dependent variable. Further, when comparing the adjusted R^2 value added to the model, the duration of fathers (0.006) as well as flexibility (0.010) add the most explanatory power to the model.

The overall findings also hold when looking at individual countries and their parental leave trajectories.

Looking at Germany, a former traditional country with a strong influence of the Church thus promoting the traditional segregation of labour: It moved from former traditional values (-0.15) in 1990 to egalitarian gender role attitudes in 2017 (0.49). The duration available to mothers decreased from a very high 109.3 weeks available in 1999 to 58 weeks in 2017. At the same time the duration available to fathers, although only slowly, increased from 0 in 1990 to 8.7 weeks in 2017. Additionally, parental leave is highly compensated with at least 85% of the previously earned wage and can be divided between parents. This shows that a decrease in parental leave available to mothers, combined with an increase in fathers' leave, as well as high compensation and a flexible design can have a positive influence on the formation of egalitarian gender role attitudes.

On the other hand, when looking at the Slovak Republic as an example country that had initially moved more towards an egalitarian view but now moved back to a traditional view with higher traditional gender role scores in 2017 than in 1990.

One can observe a gradual increase in the duration of parental leave available to mothers from 162 weeks to 164 weeks which as literature has pointed out can have negative effects on female labour force participation forcing women out of the labour market and additionally putting the main caring responsibility back onto the mother. Although the design of the parental leave is flexible indicating the possibility of mothers to transfer some time of the leave to fathers, there is no individual parental leave for fathers available. Moreover, the Slovak Republic moved from a medium-high compensation (85%) to a low compensation of 25% further removing the breadwinner responsibility away from the mother as well as additionally discouraging fathers to take up parental leave. This again shows the relative importance of parental leave available to fathers which when absent does not support the formation of egalitarian gender role attitudes.

Both country cases show that Europe is experiencing two opposing trends. Some countries are moving towards egalitarian views on labour division while others reversed this trend and are moving towards the former traditional segregation of labour. Thus, my findings do not only indicate a potential causal association between parental leave designs and gender role attitudes but also provide evidence for a move towards familism across countries that previously had been only identified across different individuals (Daly, 2011).

6. Conclusion and Reflection

6.1 Summary of main findings and policy implications

Efforts to explain the variation in gender role attitudes across Europe have provided insights into country-level as well as individual micro-level aspects. However, fewer pieces of research have investigated the effect of parental leave policies on the formation of gender role attitudes towards the gendered division of labour. Using a time-series cross-sectional research design this study adopts new evidence to analyse the effect in Europe. Grounded in the policy feedback mechanism, the study has looked at parental leave design features of duration, compensation, and flexibility and analysed their role in gender role formation across 22 European countries over the last 30 years.

The highly statistically significant results show that parental leave policies have the ability to substantially influence gender role attitudes towards the gendered division of labour across Europe. All four predictor variables, duration available to mothers, duration available to fathers, compensation, and flexibility show a statistically significant association with gender role attitudes. All factors except for the duration of mothers are positively linked to the formation of egalitarian gender role views. Thus, the findings carry important policy implications in the sense that governments can shape egalitarian gender role attitudes by decreasing the duration of parental leave available to mothers, increasing the duration available to fathers, and introducing a flexible design that offers high compensation.

Further, having looked at individual country trajectories over 30 years, the study could provide further evidence that changing only one design dimension of parental leave policies, such as the flexibility measure in the Slovak Republic, is unlikely to achieve a transformation towards egalitarian gender role attitudes, but that rather a combination of all three dimensions has to be applied simultaneously as was the case in Germany.

Overall, the findings confirm the current findings in the literature that most parental leave policies still rather follow the traditional male breadwinner model (Ferrarini, 2003; Korpi, 2000) and cater mainly to women with more extensive duration available to mothers than to fathers (Ciccia and Verloo, 2012). Nevertheless, the findings offer new evidence to support previous research on parental leave for fathers

(Sjöberg, 2004) revealing that extending parental leave to fathers constitutes an important linchpin in the implementation of egalitarian family policies.

6.2 Limitations to Study

Although the results of the OLS regressions are statistically significant and support my initial hypotheses, conclusions have to be drawn with caution.

Due to the limitations caused by the small number of observations ($n=86$) and hence a relatively small number of degrees of freedom, the study could not control for more macro-level factors that additionally impact the formation of gender role attitudes. Especially the influence of the Catholic Church in Europe has only been controlled for at the micro-level in form of the importance of religion to the individual but has not been controlled for at the macro-level. This is an important limitation since existing literature has pointed to the importance of the influence of the Catholic Church on the preferred family model and the gendered division of labour (Robila, 2012; Saxonberg and Sirovatka, 2006; Edlund and Öun, 2016). Thus, the predictor model could be improved by increasing the number of cases in order to then add additional macro-level control variables including the intensity of the influence of the Catholic Church.

Second, the study assumes a linear impact of policies that feed back into gender role attitudes. Although much research has provided evidence for the policy feedback theory to hold, this study has not examined to what extent gender role attitudes can feed back into the policy-making process. Thus, the study only focuses on top-down effects while not controlling for the significant bottom-up influence which should usually be taken into account considering that all European countries follow a democratic political system. Therefore, the results of the study only provide evidence of a potential causal mechanism with reservation to confounding circular effects on the policy-making process.

6.3 Further Research

Nevertheless, the research findings provide a foundation from which further potential research paths can be explored. First, research could contrast the findings of this study and the impact of parental leave policies on gender role attitudes with the impact of gender role attitudes on the policy-making process. By using the same

countries and the same timeframe, research could then establish to what extent the policy feedback theory holds relative to pluralism and the agenda-setting theory.

Second, since this research has additionally disclosed a trend for some countries to reverse from the initial egalitarian trend towards a more traditional division of labour, it has also laid the groundwork for further research on the factors impacting this trend. Within this research, other factors such as party ideologies, supranational organisations, or the impact of social movements and NGOs on gender role attitudes could be analysed.

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Appendix

Table A1: Regression Stage I: The Constant Intercept and R² when controlling for micro-level factors by Country and Year

Country	Constant β_0 (1990)	R ²	Constant β_0 (1999)	R ²	Constant β_0 (2008)	R ²	Constant β_0 (2017)	R ²
Austria	-1.060 (0.202)***	0.147	-	-	-0.498 (0.235)**	0.101	-0.143 (0.243)	0.187
Bulgaria	-0.497 (0.225)**	0.031	-0.463 (0.204)**	0.041	0.230 (0.199)	0.032	-1.205 (0.271)***	0.093
Czech Republic	-0.411 (0.138)**	0.026	0.223 (0.142)	0.024	0.055 (0.237)	0.030	-0.677 (0.200)***	0.058
Denmark	0.074 (0.237)	0.076	-0.528 (0.301)*	0.037	0.017 (0.225)*	0.033	0.817 (0.145)***	0.086
Estonia	-0.991 (0.209)***	0.044	-0.757 (0.215)***	0.026	-0.898 (0.287)**	0.059	-1.067 (0.286)***	0.151
Finland	-0.216 (0.268)	0.016	-0.551 (0.222)**	0.116	0.006 (0.239)	0.142	0.139 (0.180)	0.204
France	-0.423 (0.254)*	0.109	-0.359 (0.231)	0.075	-0.781 (0.266)	0.060	-0.079 (0.226)	0.191
Germany	-0.715 (0.112)***	0.157	-0.753 (0.186)***	0.158	-0.404 (0.213)*	0.131	-0.151 (0.162)	0.154
Hungary	-0.379 (0.245)	0.066	-0.099 (0.236)	0.039	-0.498 (0.233)**	0.065	-0.151 (0.303)	0.106
Iceland	-0.407 (0.224)*	0.097	-0.842 (0.179)***	0.064	-0.358 (0.240)	0.068	0.678 (0.184)***	0.204
Italy	-1.075 (0.139)***	0.148	-0.879 (0.135)***	0.076	-1.463 (0.208)***	0.143	-0.392 (0.183)**	0.224
Lithuania	-0.901 (0.173)***	0.033	-0.770 (0.162)***	0.041	-0.401 (0.190)**	0.057	-0.087 (0.226)	0.033
Netherlands	-1.601 (0.199)***	0.202	-0.750 (0.189)***	0.158	-1.088 (0.216)***	0.123	0.027 (0.149)	0.155
Norway	-0.200 (0.222)	0.090	-	-	-0.137 (0.202)	0.074	0.876 (0.249)***	0.147
Poland	-0.304 (0.206)	0.032	-0.571 (0.202)**	0.041	-0.204 (0.224)	0.064	-0.142 (0.201)	0.198
Portugal	-0.086 (0.163)	0.188	0.070 (0.207)	0.091	0.3112 (0.190)*	0.068	0.436 (0.238)*	0.151
Romania	-0.391 (0.151)**	0.055	-0.254 (0.183)	0.043	-0.076 (0.154)	0.032	-1.003 (0.182)***	0.081
Slovak Republic	-0.998 (0.197)***	0.049	-0.493 (0.267)*	0.047	-0.596 (0.271)**	0.077	-0.978 (0.299)***	0.082
Slovenia	-0.376 (0.148)**	0.070	-0.630 (0.207)**	0.096	-0.603 (0.223)**	0.046	-0.255 (0.263)	0.217
Spain	-0.329 (0.127)**	0.170	-0.224 (0.202)	0.147	-0.123 (0.260)	0.138	0.848 (0.254)***	0.196
Sweden	-0.258 (0.169)	0.044	0.004 (0.206)	0.056	0.081 (0.237)	0.091	1.075 (0.214)***	0.127
UK	-0.214	0.126	-0.607	0.052	0.359	0.076	0.167	0.137

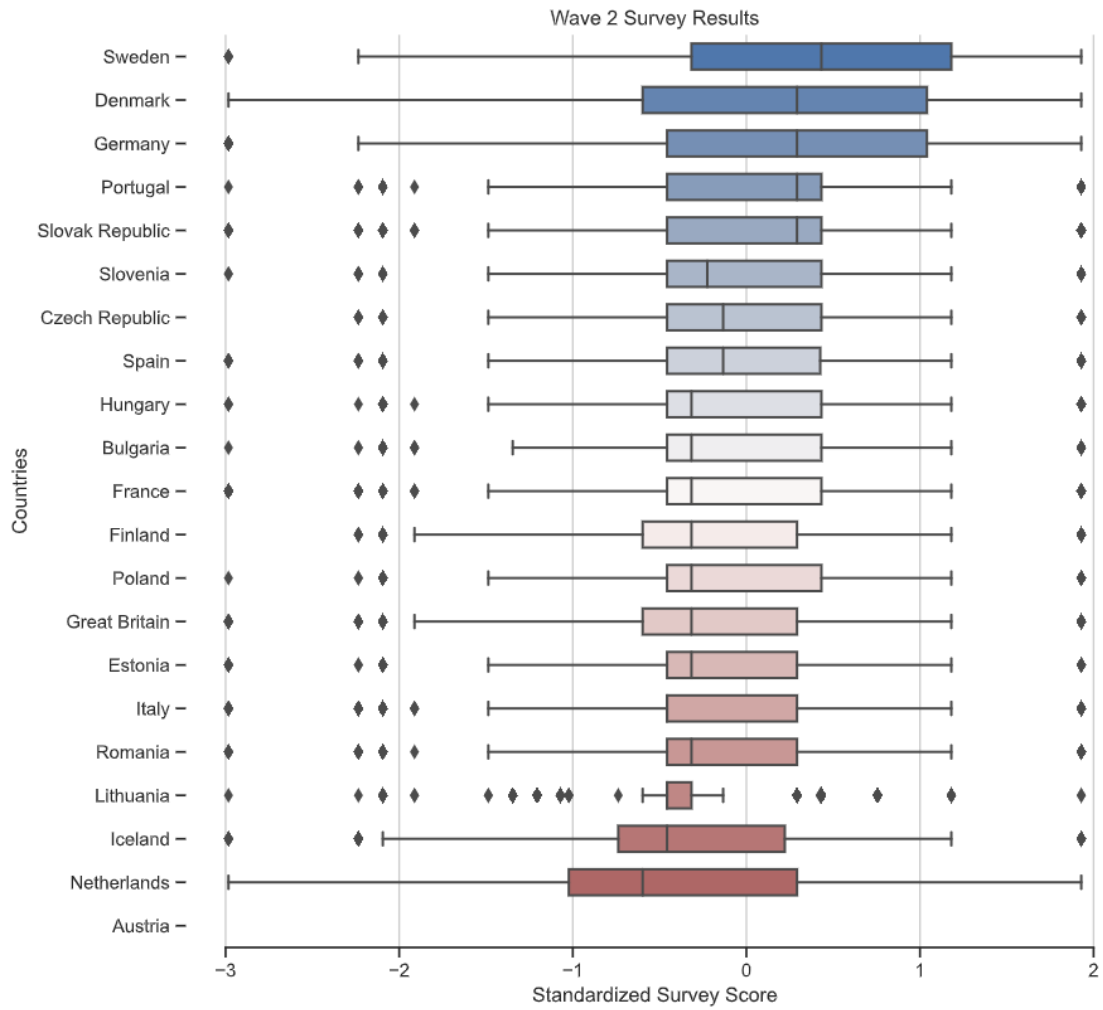
	(0.189)	(0.242)**	(0.221)	(0.220)
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Standard error in parentheses
 * p < 0.10, **p < 0.05, *** p < 0.001

Table A2: Descriptive Statistics of Second Stage Analysis - Macro-level Factors

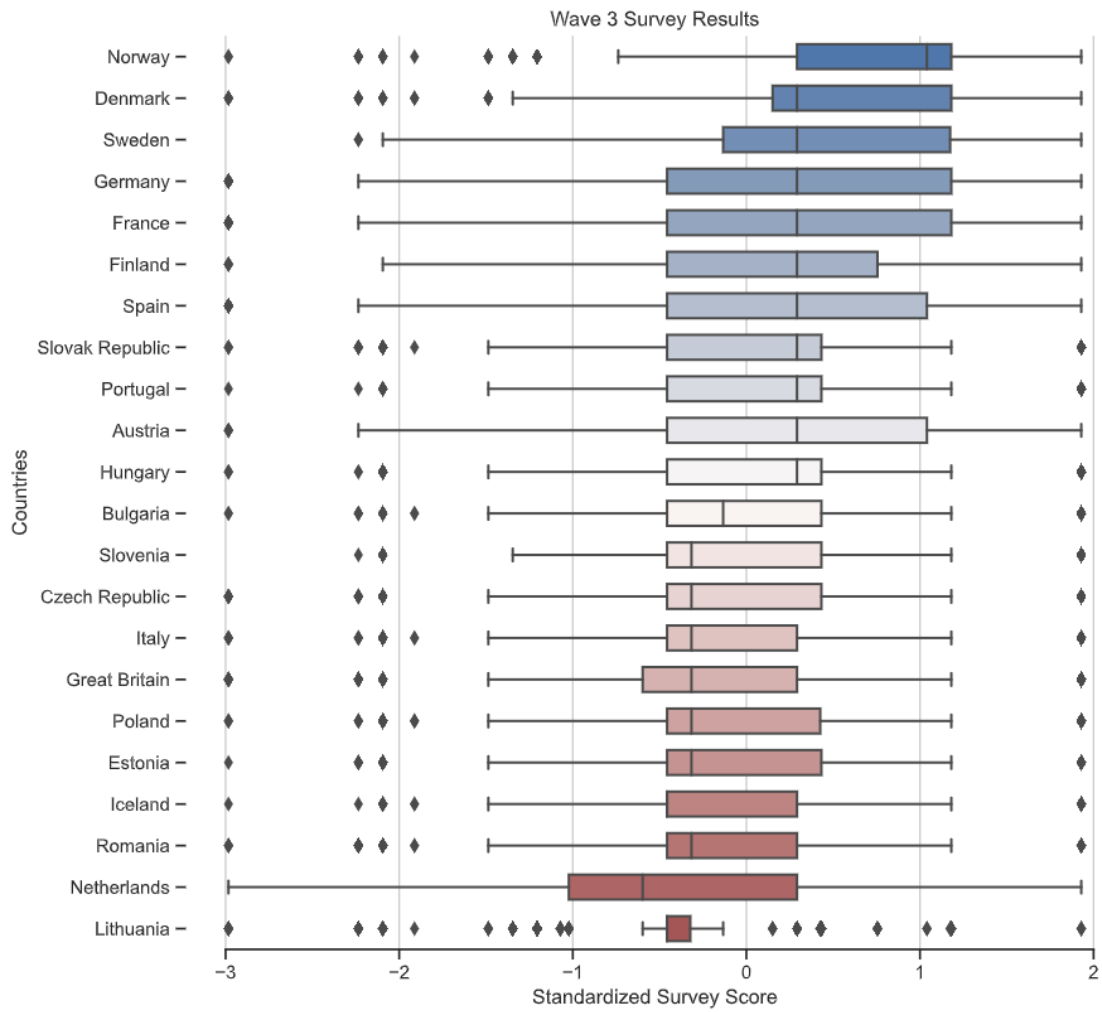
Macro-level Factors	(1) N	(2) mean	(3) sd	(4) min	(5) max
Parental Leave Fathers	86	3.16	5.54	0	28
Parental Leave Mothers	86	60.83	50.51	12.9	166
Compensation	86			25	85
Flexibility	86			0	1
GDP	86	28.30	14.75	5.27	64.05
GII	86	0.161	0.092	0.041	0.479

Figure A.1: Distribution of standardised survey score by Country Wave 2 (1999)



Note: Values plotted represent the standardised survey score of survey responses in EVS questions Q1 and Q2.1 across countries in Wave 2 (1999), with 95% confidence interval

Figure A.2: Distribution of standardised survey score by Country Wave 3 (2008)



Note: Values plotted represent the standardised survey score of survey responses in EVS questions Q1 and Q2.1 across countries in Wave 3 (2008), with 95% confidence interval