

Time *and* money: Parental leave generosity and first-time parents'
uptake of leave across 23 European countries

Nathan Robbins

Cornell University

**Time *and* money: Parental leave generosity and first-time parents'
uptake of leave across 23 European countries**

In the transition to becoming new parents, mothers and fathers face a variety of decisions regarding paid labor, housework and childcare. The initial arrangement of who takes parental leave and for how long has a lasting impact on how labor inside and outside of the home are divided. The increased demands that come with children require couples to navigate through individual- and couple-level expectations regarding gender, parenting, employment and childcare, institutional demands and norms regarding leave and duties as employees, and a policy context that reinforces cultural ideas regarding traditional and egalitarian divisions of labor. Given these influences – and often in spite of increasing egalitarian attitudes and intentions – most couples ultimately trend toward traditional male breadwinner/female caregiver household orientations (Hook, 2006; Jessen, 2022; Miller, 2011; Moberg & van der Vleuten, 2022). This division of labor perpetuates gender inequality in and outside of the home and ushers in a host of potential negative outcomes for mothers, fathers, and their children, from relationship instability and dissolution (Kaufman, 2000) to low levels of wellbeing (Hagqvist et al., 2012). The transition into parenthood has a profound impact on employment, earnings, and the wage gap between mothers and fathers. Motherhood is associated with lower earnings and an increasing gender-wage gap (Budig & England, 2001) which persists across policy contexts (Budig et al., 2012) and years into the mothers' career (Musick et al., 2020).

On the other hand, more egalitarian division of labor provides many positive outcomes for families. Parents who share leave equally rate their coparenting quality and satisfaction with their partner's caregiving more highly (Lidbeck & Bernhardsson, 2019). Fathers who are more involved in caregiving rate their parenting as more fulfilling and report better relationships with

their children (Brandth & Kvande, 2018; Rehel, 2014). Women are much more likely to resume employment when fathers increase their involvement in childcare (Norman, 2020), improving the economic well-being of the family.

Conceptually, egalitarian relationships arise from both increased participation of mothers in the workplace (with full-time employment as the gold standard) and increased involvement among fathers in both housework and childcare. One key predictor of progress in both of these dimensions is fathers' uptake of paternal leave (Almqvist & Duvander, 2014; Schober, 2014), particularly when the leave is longer than two months (Bünning, 2015). However, fathers' uptake of leave across the European Union and United Kingdom remains low, and far behind mothers both in terms of length of leave and the likelihood of taking any leave at all. Numerous factors, such as the individual and household context, employment and workplace conditions, and policy generosity have been found to influence men's take-up rates and length of leave, with much of it boiling down to whether or not the father can afford to take leave as the de facto primary provider of the household. The ability to afford leave depends on the employment characteristics and income of the household (Bose et al., 2020; Geisler & Kreyenfeld, 2011; Lappegård, 2012), as well as the generosity of leave – measured by the duration and wage replacement level paid to parents. And though countries with more generous leave policies tend to have higher participation from fathers (Karu & Tremblay, 2018), little research exists on the relation between leave generosity, take-up rates, and duration at the household level.

The purpose of this paper is to better understand how paid leave generosity influences working mothers' and fathers' use and duration of leave in the years following the transition to parenthood. What influence, if any, does the macro-level family policy of the duration and replacement wage rate have on couple-level decision making as first-time parents navigate who

takes leave and for how long? Using data from 23 countries in the European Union Labor Force Survey (EU-LFS) and from the 2018 Work-Family Reconciliation Ad-Hoc Module, I examine couples who recently (within five years) made the transition to parenthood, their likelihood of taking any leave of one month or more, and the overall length of the leave they take in relation to the generosity of paid leave available to them, measured by the amount of weeks offered *and* the rate at which it is paid. This paper contributes to the literature by helping to describe how macro-level policies influence household decision-making as new parents navigate decisions around leave and employment.

Background

Mothers' and father's division of paid and unpaid labor has been converging over the last several decades with men increasing time in both housework and childcare (Bianchi et al., 2000). However, mothers still do the majority of unpaid work, independent of their employment status, often resulting in a "second shift" for fully employed mothers (Hochschild & Machung, 2012). As men's increases in involvement in the home have tapered off, scholars note a stall in achieving more egalitarian and gender equal divisions of labor (England, 2010). These differences in paid and unpaid labor often begin as minimal among childless couples, as each are more likely to be employed and share responsibilities in the home. However, during the transition to parenthood, in response to role uncertainty and increased stressors, many couples default into more traditional roles (Miller, 2011). These losses in equal shares of work and parenting can be prevented when fathers stay home after the birth of a new child (Rehel, 2014), and thus paid parental leave and its uptake is important to promoting gender equal sharing of paid and unpaid responsibilities throughout the childrearing years.

Egalitarian Division of Labor

The division of paid and unpaid labor between partners can take many forms, but are generally conceptualized along a spectrum between more traditional and more egalitarian. In traditional households, men either increase or maintain their level of employment and/or income in an effort to fulfil the male breadwinner norm of financial provision for his family (Weinshenker, 2015). In response, the mother typically takes relatively longer periods of parental leave, particularly in countries where longer leave periods are available (Pettit & Hook, 2009). Egalitarian division of labor is produced through equal sharing of leave policies, the use of childcare (particularly government provided or subsidized care), and through resumption of full-time employment by both mother and father.

Gendered norms in the division of labor and in uptake of parental leave remain entrenched among opposite-sex coresidential couples. The traditional arrangement of fathers as breadwinners and mothers as primary caregivers persists across various contexts: adoptive and biological families, income (Moberg & van der Vleuten, 2022), occupation (Lappegård, 2012), and across nations (Hook, 2006; Olsson et al., 2023). Even in Sweden, widely regarded as one of the most gender egalitarian countries in the world, women use 78 – 82% of leave available to both parents (Moberg & van der Vleuten, 2022). Still, there is much variation in how each predictor influences the division of labor, the uptake of leave, and the use of childcare at each level.

Individual Level Predictors

Education and employment are two of the most important individual level predictors of the division of labor in households and uptake of parental leave. Fathers of all education levels are increasing their time spent in housework and childcare, though gains have been the greatest among fathers with a college education (Ellingsæter & Kitterød, 2023). More highly educated

fathers are more likely to use more leave, especially when their partners were also more educated (Sundström & Duvander, 2002). Highly educated fathers are also more likely to hold more egalitarian views regarding gender and have higher levels of participation in housework and childcare (Coltrane & Shih, 2010).

The likelihood of fathers reducing their employment responsibilities is dependent on economic factors. Younger and more disadvantaged men tend to increase their work hours in response to childcare responsibilities (Weinshenker, 2015) rather than taking leave, but they reduce their hours when their partners are employed (Hoherz & Bryan, 2020). The use of parental leave among fathers is sensitive to the economic situation of the family as well, with higher-earning fathers more likely to take leave (Sundström & Duvander, 2002).

Household Level Predictors

Household level factors, such as partner employment and income, and the number and age of children in the home also impact the division of labor between couples. Fathers are more likely to take leave when there are more children present and when the children are younger (Geisler & Kreyenfeld, 2011). They also take more leave when the mother is employed approximately the same hours as the father (Reich, 2011), or when she earns nearly the same income (Lappegard, 2008). Additionally, men's uptake of leave is the lowest when their education level is much higher than their partner's, and the highest when both partners have high levels of education (Duvander & Andersson, 2006; Geisler & Kreyenfeld, 2011), suggesting that fathers take leave only when it is economically feasible, and according to the gendered arrangements around paid and unpaid work in the household.

Country Level Predictors

The sharing of parental leave between mothers and fathers as they transition into parenthood is also shaped by country level family policies. Countries with long maternal leaves

available lead to higher uptake and subsequently less labor force participation among women and higher rates of part-time over full-time employment (Fuwa & Cohen, 2007; Pettit & Hook, 2009). Conversely, parental leave that is reserved exclusively for the father, and leave paid at or near complete replacement rates are the most supportive of men's leave taking (Castro-García & Pazos-Moran, 2016; Duvander & Johansson, 2012; O'Brien, 2009), which increases their involvement in childcare and housework (Almqvist & Duvander, 2014; Brandth & Kvande, 2018) and leads to higher levels of egalitarian division of labor in the household (Olsson et al., 2023). The gender equalizing effects of paternity leave are more pronounced for fathers who took more than two months of leave, or who took leave while their partner was working (Bünning, 2015).

The wage replacement rate, or the amount paid to parents while they are on leave, varies greatly by country. For example, Ireland offers a flat rate of 232 € per week for both paternity and parental leave, while Portugal offers a full 100% wage replacement for paternity leave, but for only 25 days, and a 25% replacement level for parental leave for 3 months thereafter. These rates may have a dramatic impact on the length of leave mothers and fathers are able to take, if they take any at all.

The level of gender inequality in a country also has far reaching effects on the uptake of leave. Adherence to traditional gender norms impacts decision making at the individual and family level, but it also informs policy making and policy uptake among families. Gender equality indices typically measure indicators such as the employment participation rate of women, their representation across industries, education levels, and the gender wage gap, to name a few.

Differential Effects on Families

High- and low-income parents' experiences regarding employment and family policies often differ greatly. About 60% of countries associated with the Organisation for Economic Co-operation and Development (OECD) fail to provide wage replacement levels that are above the poverty line for low- and average-income families. Furthermore, parental leave that can be shared by both parents is paid at a lower rate in the majority of countries (Bose et al., 2020), which may lead to unequal uptake of leave among low- and high- income mothers and fathers.

The use of and availability of childcare may also differentially influence the use of parental leave along income distributions. Childcare is used more often by higher-income families because they are better able to afford it, especially in countries where there is less government support of childcare (Pavolini & Lancker, 2018), which further exacerbates the divide between low and high SES parents (Pettit & Hook, 2009).

Parental Leave Policy Offerings

Parental leave policies vary in the amount of leave available exclusively to mothers (maternity leave), fathers (paternity leave), and that which can be shared between parents (parental leave). The other main variation in policies is the amount that is paid, which generally takes the form of either a flat-rate amount per month, or a wage replacement rate based on the parents' wages before the birth of the child (see Koslowski et al., 2022). Some countries have limits on the amount that is paid as a portion of wages, for instance Germany limits the amount to 1800 Euros per month while median household income was 4979 euros per month in 2021. The amount paid varies across maternity, paternity, and parental leave, and most countries have policies which pay lower flat rates and replacement rates through parental leave (Bose et al., 2020).

Policy responses to increase uptake of parental leave among parents can include offering more months of employment-protected leave to each parent, though long periods of leave available to mothers can impede their labor force participation (Boeckmann et al., 2015; Hook & Paek, 2020), leading to more gender inequality in paid and unpaid work among families. There has been some success in implementing “daddy months” or well-compensated paid leave exclusively for fathers, or by making more time available to both parents when fathers take a certain amount of leave (Bünning, 2015), but attempts to roll out similar policies in some EU countries has led to little or no increased uptake among men (Karu & Tremblay, 2018). A second policy response would be to increase the amount of leave paid, particularly through the shared parental leave which could encourage more equal sharing of the leave available. Generally, mothers and fathers are both more likely to take leave, for longer periods, when compensation rates are higher (Karu & Tremblay, 2018), but with available lengths of parental leave ranging from 0 weeks (Switzerland) to 156 weeks (Slovakia), high-paid leave is not enough by itself. I argue that both the length of leave and the amount paid (ie generosity) are important in increasing leave uptake among parents.

Present Study

Across the transition into parenthood, mothers and fathers face many decisions regarding employment, the division of labor, and the uptake and duration of parental leave. These decisions are influenced by individual and household factors as well as macro-level indicators such as the amount and duration of paid leave available to both parents. This study investigates the relationship between paid leave generosity (weeks available and replacement rate) and leave uptake among new parents. I include parents who were both employed at the birth of their first child so that each parent is eligible to take paid leave, and so that some level of negotiation

and/or decision-making regarding leave and employment is required. I assess the importance of leave generosity and its influence on the likelihood and duration of leave among mothers and fathers with the following hypotheses:

H1 – paid parental leave generosity will be positively associated with the likelihood of taking leave and the duration of leave taken by both mothers and fathers.

H2 – paid parental leave generosity will be more important to the rates and duration of leave take-up among lower-income households.

Method

Data

I use data from the 2018 EU Labor Force Survey (EU-LFS) and the Work-Family Reconciliation ad-hoc module. The EU-LFS is a household-level survey that includes over 1,200,000 respondents across 35 participating countries. The Work-Family Reconciliation ad-hoc module contains questions about the use of parental leave and childcare. The EU-LFS is well-suited for the research question because it includes a representative sample of two-parent households for each country and assesses change in the division of labor for both parents as a result of new childcare responsibilities. Data on the individual and employment characteristics are provided for both parents.

I also include country-level indicators from additional sources. For data on Gross Domestic Product (GDP) per capita and national spending on family policies, I used data from the Office of Economic Cooperation and Development (OECD). Data on the length and replacement rates of parental leave policies were obtained from the International Network on Leave Policies and Research (Koslowski et al., 2022). Finally, I used the Gender Equality Index,

developed by the European Institute for Gender Equality (EIGE) to assess the level of various indicators of gender equality in each country.

Sample

The sample included households in which there were two employed parents whose first child was under five years old. The child could be biologically related to both parents, step, or adopted, but both parents reported having care responsibilities for the child. Both married and cohabiting couples are included, as data are not available to differentiate between the two relationship types. Only countries who reported on the ad-hoc module variables – changes in employment due to childcare responsibilities, and use of parental leave and childcare – were included in the final sample, resulting in a sample size of 17,422 households from 23 countries (see Table 1). The EU-LFS also provides household weighting variables by country which are used to obtain representative results at the household level.

Measures

Dependent Variable. The two dependent variables in the study are 1) any leave: whether or not the mother and/or father took any leave longer than one month, and 2) leave length: the duration of the leave. For any leave, the parent was asked “have you ever spent at least one continuous month not working to look after your children?” A follow-up question asks “was a part of that time when you did not work for childcare reasons taken as parental leave.” Only parents who took leave to care for their children were included in the sample. The leave length was assessed with the question “In total, how long have you not worked to look after your children, please include maternity, paternity, and parental leave.” Responses were categorical: 0, 1-6 months, 6-12 months, and 1-2 years.

Independent Variable. The independent variable is parental leave generosity, which is measured as the number of months available to either parent times the replacement wage rate. This is known as full-time equivalent units, or FTE (Ray et al., 2010). For countries that offer a flat rate, I calculated the equivalent replacement rate at the 2018 median income for the corresponding country, assuming a full-time work week of 39 hours (see Ray et al., 2010).

Controls. I include various explanatory variables at the individual, household, and country level. Individual factors include age, income (in deciles by country), education (primary, lower secondary, or third level), and nativity. At the household level I measure the number of children under the age of 5, whether the family uses childcare services, the leave use of the partner, and whether the family lives in a city, suburban or rural area. At the country level, I measure GDP per capita, the percentage of GDP spent on family services, the percentage of GDP spend on childcare, and the level of gender equality in the country.

Analysis

I used multilevel regression to first examine the relationship between leave generosity, any leave, and leave length, with separate analyses for mothers and fathers. Logistic regression was used to assess the odds of each parent taking leave of 1) less than one month or 2) one month or more. Ordered logistic regression was used with the categorical measure of duration. In the next set of models, I ran moderation analysis to assess differences between low-, middle-, and high-income earners in their uptake rates and duration of leave based on generosity. In the first set of models, I omitted income as it has the potential to be endogenous to the model, as it is only measured at the time of the survey, between 0-5 years after the birth of the first child. It is therefore possible, and perhaps likely, that income was affected by taking leave. However, studies on the impact of leave on fathers' income shows either no statistical difference, or very

small impacts (1-3% on average; Rege & Solli, 2013). Because of the necessity to include data on income to perform the moderation, I run moderated analysis on fathers, with only fathers' income as the moderator.

Results

Descriptive statistics for the overall sample are included in Table 2. Almost 80% of all mothers took at least one month of leave, while only 11% of fathers did. In the sample of 23 countries, only four offered paternity leave of over 4 weeks (Austria, Germany, Spain, and Slovakia). Notably, several of the Nordic welfare regime countries such as Finland, Sweden, Norway, and Denmark were dropped from the sample because the ad-hoc portion of the survey was only given to one parent in each household. These countries are known for longer leaves for fathers with higher uptake rates, and this might partially explain the low uptake by fathers. Mothers' length of leave was somewhat even across the time segments, with 21% not taking a month or more, and 34% taking between 1 and 2 years. For fathers, the vast majority (89%) took no leave, and almost all of the rest (9%) took between 1 and 6 months.

Table 2. *Descriptive Statistics of Mothers and Fathers in the First Five Years of Parenthood across 23 Countries (EU-LFS 2018 Work-Family Reconciliation Module, N = 17,422)*

Variables	Mean/%	SD	Range
Dependent Variable (%)			
Any leave (mothers)	79		
Any leave (fathers)	11		
Leave length (mothers)			
0	21		
1 – 6 months	24		
6 – 12 months	20		
12 – 24 months	34		
Leave length (fathers)			
0	89		
1 – 6 months	9		
6 – 12 months	1		
12 – 24 months	1		

Independent Variable

Leave generosity (FTE)	24.2	25.3	0 – 96.2
Controls			
Father's Age	37	7.5	17-52
Mother's Age	35	6.9	17-52
Father's Income Decile ¹ (%)			
0	14.5		
1-3	10.3		
4-7	33.6		
7-9	41.6		
Mother's Income Decile ¹ (%)			
0	27.7		
1-3	26.9		
4-7	27.9		
7-9	17.6		
Relative Income (%)			
Father earns more	56		
Both earn near the same	23		
Mother earns more	21		
Father's Education (%)			
Lower secondary	17		
Upper secondary	45		
Third level	38		
Mother's education ¹ (%)			
Lower secondary	11		
Upper secondary	38		
Third level	51		
Relative education (%)			
Father higher	57		
Same	23		
Father lower	20		
Father Non-Native (%)	13		
Mother Non-Native (%)	14		
Number of children under age 5	1.3	0.4	1 – 4
Uses professional childcare services (%)	52		
Urbanicity (%)			
Cities	39		
Suburbs	34		
Rural	26		
Moderator (Father Income)			
Low (deciles 0-2)	34		
Medium (deciles 3-6)	44		
High (deciles 7-9)	22		

1 – For illustration purposes, not used in analysis

Full country-level data is available in Appendix 3.A., but I report here on the ranges of GDP, spending for all family programs, spending on childcare, family leave policies, and the gender equality index. GDP per capita (in 2018 US \$1,000) ranged from 9.45 in Bulgaria to 80.63 in Ireland. Percent GDP on all family spending ranged from 1.5% in Romania up to 3.51% in France, while childcare spending ranged from 0 in several countries (Romania, UK, and Spain) to .6% in France. Leave policies varied greatly between countries, though EU policy requires at least four months of leave to be available to each parent, and leave can be taken at any point until the child is 8 years old. Typically, countries reserve specific amounts for mothers (maternity leave), fathers (paternity leave), and a separate reserve which can be taken by either parent (parental leave). Maternity leave ranges from 6 weeks in Portugal to 52 weeks in the UK, while paternity leave ranges from 0 in Croatia and 5 days in Romania and the Netherlands, up to 28 weeks in Slovakia. Parental leave ranges from 0 in Romania up to 183 weeks in Poland.

Regression Results

I first ran multilevel regression analysis assessing the predictors of whether mothers and fathers took any leave of one month or more (Table 3). For mothers, none of the types of leave generosity (maternity, paternity, or parental) were associated with taking leave. Thus, mothers' decisions around whether to take leave are being made outside of factors related to policies on replacement wages and length together. Fathers, on the other hand, were more likely to take leave as parental leave (and not maternity or paternity leave) generosity increased ($OR = 1.03$, $p = .004$). The fact that paternity leave did not predict higher odds of taking leave may be because the average paternity leave between all 23 countries was only a little over 4 weeks.

Table 3: Multilevel logistic regression predicting parental leave uptake of mothers (model 1) and fathers (model 2). Base category: < 1 month leave taken, (EU-LFS 2018 Work-Family Reconciliation Module, N = 17,422)

Variable	Model 1: Mother		Model 2: Father	
	<i>b</i> : Odds Ratio	(SE)	<i>b</i> : Odds Ratio	(SE)
Maternity leave generosity	1.01	0.04	1.04	0.04
Paternity leave generosity	1.05	0.04	1.01	0.04
Parental leave generosity	1.00	0.00	1.03**	0.01
Father's education ¹				
Upper secondary	1.58***	0.06	1.40***	0.09
Third level	2.46***	0.07	2.25***	0.10
Relative education ²				
Same	1.35***	0.06	1.35***	0.09
Father lower	1.90***	0.08	1.79***	0.11
Father age	0.86***	0.00	1.00	0.00
Mother age	1.03***	0.00	0.99	0.00
Father nonnative	0.80**	0.07	0.87	0.10
Mother nonnative	0.61***	0.07	0.93	0.09
Number of kids under 5	1.21***	0.04	1.27***	0.05
Use of professional childcare	1.70***	0.04	0.92	0.05
Urbanicity ³				
Suburbs	0.98	0.05	0.94	0.06
Rural	0.98	0.05	0.80	0.07
Partner leave 1+ months	2.36***	0.08	2.39***	0.08
Country Level Variables				
GDP	1.00	0.02	1.00	0.02
Total family spending	1.38	0.28	0.73	0.32
Spending on childcare	3.94	0.98	0.31	1.13
Gender equality index	0.91 [†]	0.04	1.12***	0.05

*p < .05 ** p < .01 *** p < .001

1 – Base category: Primary

2 – Base category: Father higher education

3 – Base category: Urban

Education predicted leave taking in a similar way for both mothers and fathers, in that higher levels of father education and mothers higher education relative to fathers were predictive of both mothers and fathers taking any leave. Two other predictors were significant for both parents: having more children under age 5 in the home and having a partner who took 1+ month leave were associated with parents taking more leave. Urbanicity and the gender equality index were predictive for fathers alone, with rural fathers less likely to take any leave, and fathers in more gender equal countries more likely to take leave. Age, nativity, and use of childcare were

associated with leave taking for mothers only. Leave taking decreased with father age and increased with their own age. Mothers who were nonnative or had nonnative partners were less likely to take leave. Interestingly, family use of professional childcare was positively associated with mother's taking of any leave, though this combined with the results regarding education, age, nativity, and urbanicity may indicate that couples of higher socioeconomic status (SES) are more able to afford taking leave of one month or longer.

Next, I assessed whether leave generosity was associated with the length of leave new mothers and fathers take (Table 4). Again, neither maternity nor paternity leave generosity were related to the length of leave taken, though more parental leave generosity was associated with longer leaves for women (though marginally significant: $OR = 1.02, p = .08$), and for men ($OR = 1.03, p < .001$). The stronger association between generosity and men's leave length may be partially due to fathers earning a higher portion of the household income than mothers in 56% of the couples in the sample, with an additional 23% earning around the same amount.

Table 4: *Multilevel ordered logistic regression predicting parental leave length of mothers (model 1) and fathers (model 2), (EU-LFS 2018 Work-Family Reconciliation Module, N = 17,422)*

Variable	Model 1: Mother		Model 2: Father	
	<i>b</i> : Odds Ratio	(SE)	<i>b</i> : Odds Ratio	(SE)
Maternity leave generosity	1.04	0.05	1.04	0.04
Paternity leave generosity	1.04	0.05	1.01	0.04
Parental leave generosity	1.02 [†]	0.01	1.03 ^{***}	0.01
Father's education ¹				
Upper secondary	1.30 ^{***}	0.04	1.45 ^{***}	0.08
Third level	1.51 ^{***}	0.05	2.36 ^{***}	0.10
Relative education ²				
Same	1.09	0.05	1.38 ^{***}	0.08
Father lower	1.25 ^{***}	0.06	1.88 ^{***}	0.11
Father age	0.99 ^{***}	0.00	1.00 ^{***}	0.00
Mother age	1.03 ^{***}	0.00	0.99 [*]	0.00
Father nonnative	0.75 ^{***}	0.05	0.85 [†]	0.09
Mother nonnative	0.84 ^{**}	0.05	0.90 ^{**}	0.09
Number of kids under 5	2.14 ^{***}	0.03	1.20 ^{***}	0.05

Use of professional childcare	1.48***	0.03	0.95***	0.05
Urbanicity ³				
Suburbs	1.02	0.03	0.93	0.06
Rural	1.00	0.04	0.80***	0.07
Partner leave 1+ months	1.21***	0.04	1.21***	0.03
Country Level Variables				
GDP	1.00	0.02	1.00	0.02
Total family spending	1.35	0.37	0.73	0.32
Spending on childcare	2.72	1.27	0.35	1.12
Gender equality index	0.90 [†]	0.06	1.12*	0.05

*p < .05 ** p < .01 *** p < .001 † p < .10

1 – Base category: Primary

2 – Base category: Father higher education

3 – Base category: Urban

Education held a similar pattern as previous models, with higher father education predicting more leave taking for both parents. Regarding relative education, mothers with a higher education than their partners – but not those with a similar level – took more leave than those with more educated partners. Fathers took more leave when their partner had a similar or higher level of education than they did. Mothers took shorter leaves as father age increased, and longer leaves as their own age increased. Both mothers and fathers took shorter leaves if either they or their partner were nonnative, (though the relationship for nonnative fathers was marginally significant). The number of children under age 5 in the household predicted longer leaves for both parent though the odds increased by 214% for mothers compared to 20% for fathers with each additional child. Having a partner who took a leave of one month or more was associated with longer leave taking for both mothers and fathers.

In the final set of regression analysis (Table 5), I assessed whether income moderated the relationship between leave generosity and the likelihood (Model 5) and length (Model 6) of fathers' leave. Although income is measured at one timepoint up to five years after the couples' first child was born, studies generally find no effect of leave on fathers' income, though one

study found a small (1-3%) decrease (Rege & Solli, 2013). I therefore include only fathers' income as a categorical variable, with low (0 – 2nd decile), middle (3rd – 7th decile), and high (7th – 9th decile) categories. Including fathers' income was the only way to assess whether there was an income gradient to whether men take leave and for how many months if they do. Three countries (for example, France), included only household level income rather than individual income so they were omitted from this analysis, resulting in a sample of $n = 13,810$.

Table 5: *Multilevel ordered logistic (Model 5) and ordered logistic regression (Model 6) predicting income as moderator between leave generosity and likelihood (Model 5) and length (Model 6) of father leave, (EU-LFS 2018 Work-Family Reconciliation Module, $n = 13,810$)*

Variable	Model 5: Any Leave		Model 6: Leave Length	
	<i>b</i> : Odds Ratio	(SE)	<i>b</i> : Odds Ratio	(SE)
Maternity leave generosity	1.04	0.04	1.04	0.04
Paternity leave generosity	1.01	0.04	1.01	0.04
Parental leave generosity	1.03*	0.01	1.03*	0.01
Income category				
Low	0.72***	0.10	0.81***	0.08
High	1.12	0.09	1.11	0.11
Income x generosity				
Low	1.01 [†]	0.00	1.03**	0.00
High	1.00	0.00	1.00	0.00

* $p < .05$ ** $p < .01$ *** $p < .001$ [†] $p < .10$

Results of the interaction analysis show a similar relationship between parental leave generosity and taking any leave and taking longer leaves ($OR = 1.03$, $p = .02$) but that lower income men are significantly less likely than middle income men to take any leave ($OR = .72$, $p < .001$), and less likely to take longer leaves ($OR = .81$, $p < .001$). Income moderated the relationship between leave generosity and taking any leave, where lower income fathers in countries with higher wage replacement rates had a higher likelihood of taking leave. Specifically, for each one-unit increase in leave generosity, lower-income fathers had a 1% increase in the odds of taking any leave, though the relationship was only marginally significant.

Income also moderated the relationship between generosity and the length of leave taken, where lower-income fathers had 3% increased odds of taking a higher category of leave length (for instance 12-18 months instead of 6-12 months) for every one-unit increase in leave generosity.

Discussion

Using data from 23 European countries, I examined the individual, household and national contexts involved in dual-earner couples' decisions regarding leave taking and the role that leave generosity plays in this process. Previous studies have shown that, on the whole, countries with more generous leaves have higher uptakes, and others have found individual and household factors that matter to the take-up of leave, but this is the first study cross-national study that has examined which households, as well as which partners, benefit most from generous leave policies.

The first hypothesis of the study – that generous leave policies would be associated with both partners more likely to take leave and taking longer leaves – was only partially supported. Policy generosity was not associated with mothers' leave, and only parental leave generosity was associated with more fathers taking leave and taking longer leaves. This is in line with findings from the OECD that women generally take whatever leave is available to them (Parental leave: Where are the fathers?, 2016), while the results of this study indicate that fathers are more likely to take only the amount of leave they can afford. This likely stems from, and contributes to, a persistent male breadwinner norm throughout EU countries (see Cooke, 2006; Gonalons-Pons & Gangl, 2018, Vitali & Arpino, 2016) that prescribes short leaves and quick returns for fathers, while mothers take the lion's share of parental leave. As noted previously, fathers earned roughly the same or more than their partners in 79% of households in this sample, and many families

cannot afford for fathers to stay home for long durations, particularly when the wage replacement is low or zero.

The results of the second hypothesis – that generosity will be more salient to low-income men – seem to bear out this notion of affordability: lower-income men were much less likely to take any leave, and took shorter leaves, than middle-income men. Leave policy generosity, however, was associated with an increase in both the likelihood and length of leave among low-income men. Fathers' uptake of parental leave is generally described in terms of desire, based on attitudes, culture and gender roles (see Duvander, 2014; Hyde, 1993; Hoherz & Bryan, 2016), and barriers that keep men from their desired use of leave (Haas & Hwang, 2019; Narvi & Salmi, 2019). These results suggest that low-income men are particularly susceptible to barriers that may keep them from the level of leave and involvement with their families that they desire, and higher replacement wages may be a remedy. Additionally, fathers who take longer leaves make it easier for mothers to return to employment (Schober & Zoch, 2018), which may be especially important for low-income families.

Fathers in the EU have varying access to three types of leave: 1) paternity leave, which is available to all men directly after the birth of their child and is paid at up to 100% of their income. The average length is 12.5 days, and ranges from 4 days to 4 weeks, 2) so called “daddy months” that are a portion of parental leave reserved for fathers, often in use it or lose it conditions to incentivize use, and 3) parental leave that can be shared with mothers. The majority of daddy months and shared parental leaves are paid below 100% replacement, going as low as 25% (van Belle, 2016). Offering complete wage replacement to fathers would guarantee that all men can take leave without economic repercussions and would help close the gap between uptake of parental leave by low and high SES men. Of course, many other factors influence

whether and for how long men take parental leave after the birth of their child/ren, but as more countries offer larger compensation, many of the stigmas, occupation and workplace barriers, and social norms keeping men from taking more leave may be reduced in the process.

Limitations and Future Directions

It is important to note that the results of this study are from cross-sectional data and do not establish a causal link between raising replacement wage rates and an increase in the likelihood or length of leave. It is impossible from this data alone, for example, to know if there is a specific level of leave length and/or replacement rate that would lead to the highest uptake from fathers while still being politically feasible and affordable. Further studies are needed to establish a causal link and define such parameters.

The LFS data also has a substantial number of countries that do not report on various variables that are key to the study, such as occupation, income, and leave. This resulted in a sample from 23 countries, rather than the full 27 countries in the EU – and 5 additional countries surveyed in the EU-LFS data – which would be more conducive to multilevel modeling for which a sample size of at least 30 is ideal. Due to the inconsistent reporting, the sample also included larger portions from the Southern welfare state regimes like Italy and Spain than countries with likely more egalitarian leanings, such as those from the Nordic welfare regime.

I avoid including income in the first models of the analysis, as income is measured at the time of the survey, between 0 and 5 years after the birth of the couple's first child. Because income is measured after the birth of the child, it is not possible to assess what impact the birth, and any related leave, had on the employment status and income of each parent. However, very little impact of parental leave on men's employment and earnings has been documented, with one study finding a small (1-3%) decrease in wages over time after taking leave (Rege & Solli,

2013). Future studies that can measure income from both parents before and after the birth of the first child would add greatly to our understanding of the role of income in the uptake of leave by both mothers and fathers.

Despite these limitations, findings from the study are largely in harmony with previous findings regarding individual and household characteristics and their relation to the use of parental leave. Future research could make use of natural experiments where countries increased or decreased the wage replacement rate to measure the effects those changes might have had on high and low SES men's use of parental leave and their subsequent involvement in childcare and housework. Alternatively, EU countries may explore pilot programs where leave compensation, and particularly that for men, is increased to examine the effects it has on leave taking across incomes, backgrounds, and regions. The results of this study suggest that leave lengths will increase – and quite dramatically among countries with the lowest leave generosity – which would have a positive impact on families in various aspects of their well-being.

References

- Almqvist, A.-L., & Duvander, A. (2014). Changes in gender equality? Swedish fathers' parental leave, division of childcare and housework. *Journal of Family Studies, 20*(1), 19–27. <https://doi.org/10.5172/jfs.2014.20.1.19>
- Bianchi, S. M., Milkie, M. A., Sayer, L. C., & Robinson, J. P. (2000). Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor. *Social Forces, 79*(1), 191–228. <https://doi.org/10.1093/sf/79.1.191>
- Boeckmann, I., Misra, J., & Budig, M. J. (2015). Cultural and Institutional Factors Shaping Mothers' Employment and Working Hours in Postindustrial Countries. *Social Forces, 93*(4), 1301–1333. <https://doi.org/10.1093/sf/sou119>
- Bose, B., Raub, A., Earle, A., & Heymann, J. (2020). Can Working Women and Men Afford to Take Paid Leave? A Comparative Study of the Level of Paid Leave Benefits and Poverty Thresholds in the OECD. *Journal of Comparative Policy Analysis: Research and Practice, 22*(5), 422–439. <https://doi.org/10.1080/13876988.2019.1629066>
- Brandth, B., & Kvande, E. (2018). Masculinity and Fathering Alone during Parental Leave. *Men and Masculinities, 21*(1), 72–90. <https://doi.org/10.1177/1097184X16652659>
- Budig, M. J., & England, P. (2001). The Wage Penalty for Motherhood. *American Sociological Review, 66*(2), 204–225. <https://doi.org/10.2307/2657415>
- Budig, M. J., Misra, J., & Boeckmann, I. (2012). The Motherhood Penalty in Cross-National Perspective: The Importance of Work–Family Policies and Cultural Attitudes. *Social Politics: International Studies in Gender, State & Society, 19*(2), 163–193. <https://doi.org/10.1093/sp/jxs006>

- Bünning, M. (2015). What Happens after the ‘Daddy Months’? Fathers’ Involvement in Paid Work, Childcare, and Housework after Taking Parental Leave in Germany. *European Sociological Review*, 31(6), 738–748. <https://doi.org/10.1093/esr/jcv072>
- Castro-García, C., & Pazos-Moran, M. (2016). Parental Leave Policy and Gender Equality in Europe. *Feminist Economics*, 22(3), 51–73.
<https://doi.org/10.1080/13545701.2015.1082033>
- Coltrane, S., & Shih, K. Y. (2010). Gender and the Division of Labor. In J. C. Chrisler & D. R. McCreary (Eds.), *Handbook of Gender Research in Psychology: Volume 2: Gender Research in Social and Applied Psychology* (pp. 401–422). Springer.
https://doi.org/10.1007/978-1-4419-1467-5_17
- Duvander, A., & Andersson, G. (2006). Gender Equality and Fertility in Sweden: A Study on the Impact of the Father’s Uptake of Parental Leave on Continued Childbearing. *Marriage & Family Review*, 39(1–2), 121–142. https://doi.org/10.1300/J002v39n01_07
- Duvander, A.-Z., & Johansson, M. (2012). What are the effects of reforms promoting fathers’ parental leave use? *Journal of European Social Policy*, 22(3), 319–330.
<https://doi.org/10.1177/0958928712440201>
- Ellingsæter, A. L., & Kitterød, R. H. (2023). Enabling family policies, changing gender norms: Increasing childcare and housework among Norwegian fathers from 1980–2010. *Journal of Family Studies*, 0(0), 1–18. <https://doi.org/10.1080/13229400.2023.2179524>
- England, P. (2010). The Gender Revolution: Uneven and Stalled. *Gender & Society*, 24(2), 149–166. <https://doi.org/10.1177/0891243210361475>
- Fuwa, M., & Cohen, P. N. (2007). Housework and social policy. *Social Science Research*, 36(2), 512–530. <https://doi.org/10.1016/j.ssresearch.2006.04.005>

- Geisler, E., & Kreyenfeld, M. (2011). Against all odds: Fathers' use of parental leave in Germany. *Journal of European Social Policy*, 21(1), 88–99.
<https://doi.org/10.1177/0958928710385732>
- Hagqvist, E., Gådin, K. G., & Nordenmark, M. (2012). Division of labor, perceived labor-related stress and well-being among European couples. *Open Journal of Preventive Medicine*, 02(04), Article 04. <https://doi.org/10.4236/ojpm.2012.24064>
- Hochschild, A., & Machung, A. (2012). *The Second Shift: Working Families and the Revolution at Home*. Penguin.
- Hoherz, S., & Bryan, M. (2020). Provider or Father? British Men's Work Hours and Work Hour Preferences after the Birth of a Child. *Work, Employment and Society*, 34(2), 193–210.
<https://doi.org/10.1177/0950017019870752>
- Hook, J. L. (2006). Care in context: Men's unpaid work in 20 countries, 1965–2003. *American Sociological Review*, 71(4), 639–660. <https://doi.org/10.1177/000312240607100406>
- Hook, J. L., & Paek, E. (2020). National Family Policies and Mothers' Employment: How Earnings Inequality Shapes Policy Effects across and within Countries. *American Sociological Review*, 85(3), 381–416. <https://doi.org/10.1177/0003122420922505>
- Hyde, J. S., Essex, M. J., & Horton, F. (1993). Fathers and parental leave: Attitudes and experiences. *Journal of Family Issues*, 14(4), 616–638.
<https://doi.org/10.1177/019251393014004008>
- Jessen, J. (2022). Culture, children and couple gender inequality. *European Economic Review*, 150, 104310. <https://doi.org/10.1016/j.euroecorev.2022.104310>

- Karu, M., & Tremblay, D.-G. (2018). Fathers on parental leave: An analysis of rights and take-up in 29 countries. *Community, Work & Family*, 21(3), 344–362.
<https://doi.org/10.1080/13668803.2017.1346586>
- Kaufman, G. (2000). Do Gender Role Attitudes Matter?: Family Formation and Dissolution Among Traditional and Egalitarian Men and Women. *Journal of Family Issues*, 21(1), 128–144. <https://doi.org/10.1177/019251300021001006>
- Koslowski, A., Blum, S., Dobrotic, I., Kaufman, G., & Moss, P. (2022). *18th International Review of Leave Policies and Related Research 2022* (No. 18; pp. 1–545). International Network on Leave Policies and Research.
- Lappégard, T. (2008). Changing the Gender Balance in Caring: Fatherhood and the Division of Parental Leave in Norway. *Population Research and Policy Review*, 27(2), 139–159.
<https://doi.org/10.1007/s11113-007-9057-2>
- Lappégard, T. (2012). Couples' parental leave practices: The role of the workplace situation. *Journal of Family and Economic Issues*, 33(3), 298–305. <https://doi.org/10.1007/s10834-012-9291-6>
- Lidbeck, M., & Bernhardsson, S. (2019). Having it all – perceived coparenting quality and work-family balance in the context of parental leave. *Community, Work & Family*, 0(0), 1–18.
<https://doi.org/10.1080/13668803.2019.1704399>
- Miller, T. (2011). Falling back into Gender? Men's Narratives and Practices around First-time Fatherhood. *Sociology*, 45(6), 1094–1109. <https://doi.org/10.1177/0038038511419180>
- Moberg, Y., & van der Vleuten, M. (2022). Why do gendered divisions of labour persist? Parental leave take-up among adoptive and biological parents. *European Sociological Review*, jcac058. <https://doi.org/10.1093/esr/jcac058>

- Musick, K., Bea, M. D., & Gonalons-Pons, P. (2020). His and Her Earnings Following Parenthood in the United States, Germany, and the United Kingdom. *American Sociological Review*, 85(4), 639–674. <https://doi.org/10.1177/0003122420934430>
- Närvi, J., & Salmi, M. (2019). Quite an encumbrance? Work-related obstacles to Finnish fathers' take-up of parental leave. *Community, Work & Family*, 22(1), 23–42. <https://doi.org/10.1080/13668803.2018.1487828>
- Norman, H. (2020). Does Paternal Involvement in Childcare Influence Mothers' Employment Trajectories during the Early Stages of Parenthood in the UK? *Sociology*, 54(2), 329–345. <https://doi.org/10.1177/0038038519870720>
- O'Brien, M. (2009). Fathers, Parental Leave Policies, and Infant Quality of Life: International Perspectives and Policy Impact. *The ANNALS of the American Academy of Political and Social Science*, 624(1), 190–213. <https://doi.org/10.1177/0002716209334349>
- Olsson, M. I. T., van Grootel, S., Block, K., Schuster, C., Meeussen, L., Van Laar, C., Schmader, T., Croft, A., Sun, M. S., Ainsaar, M., Aarntzen, L., Adamus, M., Anderson, J., Atkinson, C., Avicenna, M., Babel, P., Barth, M., Benson-Greenwald, T. M., Maluku, E., ... Martiny, S. E. (2023). Gender Gap in Parental Leave Intentions: Evidence from 37 Countries. *Political Psychology, Advance online publication*, 1–30. <https://doi.org/10.1111/pops.12880>
- Pavolini, E., & Lancker, W. V. (2018). The Matthew effect in childcare use: A matter of policies or preferences? *Journal of European Public Policy*, 25(6), 878–893. <https://doi.org/10.1080/13501763.2017.1401108>
- Parental leave: Where are the fathers?* (pp. 1–2). (2016). [Policy Brief]. Organisation for Economic Co-operation and Development. <https://www.oecd.org/policy-briefs/parental->

leave-where-are-the-fathers.pdf

Pettit, B., & Hook, J. L. (2009). *Gendered Tradeoffs: Women, Family, and Workplace Inequality in Twenty-One Countries*. Russell Sage Foundation.

[http://encompass.library.cornell.edu/cgi-](http://encompass.library.cornell.edu/cgi-bin/checkIP.cgi?access=gateway_standard%26url=https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1069814&site=eds-live&scope=site)

[bin/checkIP.cgi?access=gateway_standard%26url=https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1069814&site=eds-live&scope=site](http://encompass.library.cornell.edu/cgi-bin/checkIP.cgi?access=gateway_standard%26url=https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1069814&site=eds-live&scope=site)

Ray, R., Gornick, J. C., & Schmitt, J. (2010). Who cares? Assessing generosity and gender equality in parental leave policy designs in 21 countries. *Journal of European Social Policy*, 20(3), 196–216. <https://doi.org/10.1177/0958928710364434>

Rege, M., & Solli, I. F. (2013). The Impact of Paternity Leave on Fathers' Future Earnings. *Demography*, 50(6), 2255–2277. <https://doi.org/10.1007/s13524-013-0233-1>

Rehel, E. M. (2014). When dad stays home too: Paternity leave, gender, and parenting. *Gender & Society*, 28(1), 110–132. <https://doi.org/10.1177/0891243213503900>

Reich, N. (2011). Predictors of Fathers' Use of Parental Leave in Germany. *Population Review*, 50(2). <https://doi.org/10.1353/prv.2011.0011>

Schober, P. S. (2014). Parental Leave and Domestic Work of Mothers and Fathers: A Longitudinal Study of Two Reforms in West Germany. *Journal of Social Policy*, 43(2), 351–372. <http://dx.doi.org.proxy.library.cornell.edu/10.1017/S0047279413000809>

Schober, P. S., & Zoch, G. (2019). Change in the gender division of domestic work after mothers or fathers took leave: Exploring alternative explanations. *European Societies*, 21(1), 158–180. <https://doi.org/10.1080/14616696.2018.1465989>

- Sundström, M., & Duvander, A. E. (2002). Gender Division of Childcare and the Sharing of Parental Leave among New Parents in Sweden. *European Sociological Review*, 18(4), 433–447. <https://doi.org/10.1093/esr/18.4.433>
- van Belle, J. (2016). *Paternity and parental leave policies across the European Union*. RAND Corporation. <https://doi.org/10.7249/RR1666>
- Weinshenker, M. (2015). The Effect of Fatherhood on Employment Hours: Variation by Birth Timing, Marriage, and Coresidence. *Journal of Family Issues*, 36(1), 3–30. <https://doi.org/10.1177/0192513X13493280>

Appendix

Appendix 3.A. *Country-Level Data on GDP, Family Spending, and Parental Leave Policies*

Country	GDP/Capita	Total Family Spending	Childcare Spending	Maternity Leave Weeks	Paternity Leave Weeks	Parental Leave Weeks	Parental Leave Generosity	Gender Equality Index
Austria	52.09	2.58	0.3	16	8.7	97.3	41	63.3
Belgium	47.75	3.13	0.1	15	2	17.3	4.15	70.5
Bulgaria	9.45	1.80	0.0	19	2	58.6	0.29	58.0
Cyprus	29.42	2.50	0.0	18	2	0	0	53.1
Czech Republic	37.45	2.13	0.4	28	2	136	3.52	53.6
Germany	49.72	3.20	0.5	14	8	148	96.2	65.5
Estonia	32.95	3.25	0.5	20	2	146	69	56.7
Spain	37.67	1.43	0.0	16	16	150	0	68.3
France	42.46	3.51	0.6	16	4	146	18.25	72.6
Greece	27.59	1.88	0.1	17	2	8	0	46.4
Hungary	30.30	3.22	0.1	24	1	136	56	50.8
Ireland	80.63	1.80	0.2	42	2	18	19.2	69.5
Italy	38.90	1.89	0.1	26	0.8	26	13.2	62.1
Latvia	28.20	2.25	0.2	16	1.4	78	31.2	57.9
Lithuania	33.24	2.27	0.2	18	4	148	40.34	56.8
Malta	31.57	1	0.6	18	.8	52	0	60.1
Netherlands	53.22	1.83	0.4	16	0.4	26	0	72.9
Poland	30.42	2.85	0.3	20	2	183.7	25.6	56.8
Portugal	32.45	1.67	0.2	6	4	128.1	3.5	56.0
Romania	12.49	1.50	0.0	18	0.7	0	88.4	52.4
Slovenia	35.59	1.81	0.3	15	3.6	37	18	68.4
Slovakia	32.68	1.96	0.1	34	28	130	46.8	52.4
United Kingdom	44.44	3.08	0.0	52	2	18	0	69.0