The Association Between Gendered Workplaces and the Length of Childcare Leave

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Abstract

Previous research indicates that mothers base the length of their childcare leave on individual opportunity costs. While workplace dynamics and peer influences may affect the duration of the leave, empirical evidence remains inconclusive. This study investigates the association between childcare leave length and workplace characteristics, as well as peer influences in the Finnish institutional context. In Finland, mothers can extend their earnings-related childcare leave with a flat-rate home care allowance until their child turns three years old. At the same time, they are entitled to subsidised day care, allowing them to choose the length of their childcare leave. Our results show that, in the gender-segregated Finnish labour market, the length of childcare leave among mothers varies based on employment sector, number of employees, peers' leave length, and the share of women in the workplace.

Keywords: childcare leave length; workplace; peers; gender segregation

Introduction

The Nordic countries have adopted more egalitarian family policies by encouraging and supporting fathers to participate more in childcare. However, fathers' take-up of parental leave is still low, and mothers take more responsibility for childcare (Duvander et al. 2019). The gender gap between women and men, in employment and especially in earnings, is still persistent, mainly due to the consequences of motherhood (Kleven et al. 2019). Since long childcare leaves contribute to the gender gap, understanding the factors affecting employment re-entry among mothers can help counteract the gender gap.

Previous research shows that there are individual variations in childcare leave lengths among mothers. In the economic literature, mothers are assumed to decide the length of their childcare leave based on their opportunity costs. For instance, women who are weakly attached to the labour market have longer childcare leaves than mothers with high earnings (Kuhlenkasper and Kauermann 2010; Österbacka and Räsänen 2022). However, negative or positive attitudes or norms towards motherhood may also influence the decisions made by mothers. Williams (2010) points out that masculine norms in the labour market, which imply that men are the main breadwinners, restrain women from combining family and career. Women tend to assume the main responsibility for their children and household, potentially to a larger extent than they would prefer. This is the case despite the public support for families; one of the aims of family policies is to support mothers and facilitate their childcare responsibilities. In the Nordic context, the possibility to use home care allowance reduces labour force participation among mothers (Rønsen and Sundström 2002; Schøne 2004; Kosonen 2014; Giuliani and Duvander 2017). Higher reimbursement levels increase the length of home care (Österbacka and Räsänen 2022), in addition to which family-oriented mothers tend to use longer childcare leaves if they are entitled to longer leaves (Burgess et al. 2008; Olivetti and Petrongolo 2017).

Women's career choices and leave lengths appear to be related. The childcare leave length tends to be influenced by the decisions made by peers at the same workplace, and for instance, mothers-to-be are influenced by their social relations at the workplace level (Bernardi 2003; Pink et al. 2014; Welteke and Wrohlich 2019), although the empirical support for peer effects is based on small samples. In addition, Ginja et al. (2023) point out that the response to childcare leaves varies among firms. The variation in response is mainly due to the firm's ability to find a replacement for the mother (or father) on leave.

Why do some mothers use shorter leaves while others choose longer periods of childcare leave? The association between individual characteristics and leave length has been studied largely, while the importance of workplaces and peers have been studied to a lesser extent. In this paper, we specifically study the association between workplace characteristics and cumulative childcare leave length. In addition, we shed light on the importance of peers in a gender-segregated labour market.

To analyse the factors affecting the duration of childcare leaves, we use the Finnish context. The Finnish childcare leave policy allows parents to choose the leave length up until the youngest child turns three years old. During the studied time period, the

earnings-related parental leave lasts until the child is around 10 months old. In addition, home care of children is publicly supported with a low flat-rate benefit, the home care allowance, until the child's third birthday. If parents on leave have a permanent or long-term employment contract, they are protected against termination and can return to their previous job after childcare leave. Mothers use a lion's share of parental leave and, in addition, extend their childcare leaves with home care allowance (for a more detailed overview of the Finnish childcare leaves see e.g., Räsänen et al. 2019 or Österbacka and Räsänen 2022).

In our analyses, we use Finnish person-level register data, information on individual childcare leaves, and employer-employee links to identify workplace characteristics. Hence, we can identify the workplace environment mothers experience prior to becoming a mother. In addition, we calculate average childcare leave lengths at workplace levels to analyse the association with previous leave lengths among peers, which is a relatively new methodological contribution (see, for instance, Welteke and Wrohlich 2019).

Additionally, we contribute to the discussion on the gender-segregated labour market. If workplace characteristics and peers are associated with variations in childcare leave lengths, it may contribute to the gender pay gap. Longer childcare leaves harm the earnings trend to a greater extent than shorter leaves. If longer childcare leaves are more prevalent in female-dominated workplaces, gender segregation in the labour market may increase the gender pay gap.

Background

Theoretical background and related empirical research

When a child is born, the parents are faced with new tasks. In most cases, the mother reduces her labour supply and leisure when caring for the child. However, childcare leaves have both direct and indirect opportunity costs. The direct costs include, among other things, forgone earnings, while the indirect costs are the costs related to childcare leaves. Indirect costs arise from various situations. First, childcare leave periods may lead to a reduction in market productivity if human capital depreciates, i.e., if the acquired work-related skills deteriorate (Mincer 1974; Mincer and Ofek 1982). Second, planned childcare leave periods can have implications for sorting into different types of careers pre-birth, or preferences may change after becoming a parent with implications for sorting into more family-friendly jobs post-birth (Gronau, 1988; Kuziemko et al. 2018). Third, long childcare leaves may signal reduced work orientation, to which employers react by offering less-demanding and lower-paid jobs (Barron et al. 1993; Gayle and Golan 2012; Cassidy et al. 2016). An alternative explanation to sorting pre-birth is that there is a relationship between lower market productivity and childbirth, or that the cost of childbirth is lower among women with lower market productivity. However, the opportunity costs for childcare leaves vary among women with different types of individual characteristics and labour market attachments.

These childcare leave costs have implications for the gender pay gap. The importance of the costs related to motherhood in the total gender pay gap has increased in the past 30 years (Kleven et al. 2019). In addition, longer childcare leaves tend to harm careers more than shorter ones (Burgess et al. 2008; Pronzato 2009; Olivetti and Petrongolo 2017). However, childcare leaves shorter than nine months do not seem to have any effect on the mothers' career development (Hook et al. 2023). So why do some mothers choose shorter while others use longer childcare leaves?

Previous research shows that individual characteristics are related to the length of childcare leave. Institutions and workplace characteristics interact with individual characteristics and are important for individual decisions as well. In cases where mothers are entitled to long parental leaves with job protection, those with higher opportunity costs are more likely to return to work faster, and the timing of return is affected by the reimbursement level during childcare leave (Felfe 2012b; Österbacka and Räsänen 2022). Furthermore, family-oriented mothers tend to have more children and use longer childcare leaves if they are entitled to long leaves (Burgess et al. 2008; Olivetti and Petrongolo 2017).

In addition to individual characteristics, the workplace itself may have a direct effect on the mothers' choices. Walker (1995) theorises on fertility behaviour, assuming that childbearing is closely related to costs consisting of forgone earnings, child expenditure, and value of forgone human capital accumulation. Higher wages and higher levels of human capital depreciation during childcare leave increase the costs of childbearing. Similarly, higher net child expenditures, where public support is taken into consideration, increase the costs. The model presented by Walker (1995) also implies that longer childcare leaves increase the costs, while shorter childcare leaves reduce the costs. Accordingly, the model implies that variations in the demands for human capital and corresponding wage levels at workplaces affect the choice of leave length. A mother employed at a workplace offering high wages or with an increased risk for human capital depreciation during career breaks, bears higher costs for childbearing the longer her childcare leave becomes.

Mothers may self-select into family-friendly careers to reconcile career and family. If so, they would likely look for less-demanding jobs related to lower earnings possibilities. Arguably, mothers self-select into the public sector in Denmark because the public sector offers better working conditions but, at the same time, lower earnings than the private sector (Skyt Nielsen et al. 2004). Workplace characteristics influence the possibility to combine work and family as well as the subsequent leave lengths and wages (Skyt Nielsen et al. 2004; Felfe 2012a,b). However, some studies find that childless women and future mothers have similar careers (see, e.g., Lucifora et al. 2021).

However, mothers may switch to less-demanding jobs when re-entering work after childcare leaves. When returning to work, mothers may be willing to trade off a share of their earnings against fewer job-related hazards (Felfe 2012a,b). Suppose mothers prefer flexible work arrangements and shorter working hours, but employers reward long hours with typical schedules. In such case, choosing a family-friendly workplace or reduced working hours may harm the earnings trend among mothers (Goldin 2014). On the other hand, Wuestenenk and Begall (2022) do not find that mothers would be more willing to trade earnings for more family-friendly work environments, and Wilner (2016) finds no empirical support for mothers endogenously choosing different types of firms compared

to non-mothers. There is, however, empirical support for mothers being less likely promoted post-birth (Lucifora et al. 2021).

Studies on the impact of workplaces suggest that peers do influence each other. Colleagues are more similar than random individuals; through their interactions, they are likely to learn from each other. Childbearing spreads among colleagues, and women are likely to discuss the costs and benefits of becoming a mother and conform their childcare leave lengths to the workplace level (Bernardi 2003; Pink et al. 2014; Welteke and Wrohlich 2019). In addition, the employer's ability to find a replacement or make other rearrangements during childcare leave may affect the leave length. If the mother is, for instance, highly specialised or employed in a small workplace and difficult to replace during childcare leave, the employer may suggest a short childcare leave (Ginja et al. 2023).

The significance of the public sector has also been studied to a certain extent. Some studies present arguments for a welfare state paradox, as welfare states with generous support to families are found to restrain women's careers (see, e.g., Mandel and Semyonov 2006). Mothers tend to self-select into the family-friendly public sector. However, their earnings are less penalised after birth compared to the penalty in the less family-friendly private sector (Skyt Nielsen et al. 2004). A larger share of the workforce employed by the public sector generally contributes to a gender-segregated labour market. Longer parental leaves contribute, in addition, to higher occupational gender segregation (Akgunduz and Plantenga 2013). However, childcare leaves are related to occupational gender segregation, but the relationship is an understudied area (Pertold-Gebicka 2020).

Another implication of the public sector is that publicly financed parental leave moderates the direct costs of forgone earnings. On the other hand, public support for childcare alters the budget constraint and affects the choice between childcare alternatives. Support for day care generally increases demand, while support for home care increases the relative price of day care and reduces demand. The choices of childcare leave length among mothers are likely to vary, as their budget constraints and preferences differ (Kornstad and Thoresen 2007; Burgess et al. 2008).

Institutional background

We analyse the Finnish context, where parental leaves and day care are publicly subsidised. The Finnish universal childcare leave policy includes earnings-related maternal, paternal, and parental leaves. Until the most recent paternal leave reform in 2022, the total duration of leave remained at around ten months for decades (for more details on the latest reform, see Lammi-Taskula et al. 2023). The regulations for the replacement rates cover all employees and are based on an individual's taxable earnings. In addition to the earnings-related parental leave, a flat-rate home care allowance is available until the child turns three years old.

In the early 2000s, paternal leave was reformed on several occasions by increasing the father's quota. Regardless, around 70% of fathers used a share of their paternal leave

concurrently with the maternal leave, and slightly less than 30% used none of their paternity leave in the last decade. Because of the introduction of the father's quota in 2003, as well as the subsequent reforms, an increasing share of fathers use their earmarked leave. However, the reforms have not changed the mothers' use of parental leave. Even when parents can share their parental leave days, mothers usually use the complete parental leave period, which ends when the child is about nine months old (Saarikallio-Torp and Miettinen 2021).

Additionally, if the parents choose to prolong their earnings-related parental leave period with home care allowance, it is mainly the mother who stays home with the child. If the parent was employed before childcare leave and their contract exceeds the child's third birthday, the home care allowance period is job-protected until the child turns three. After the earnings-related parental leave, municipalities are obligated to offer publicly subsidised day care to all under-school-aged children.

Mothers are the primary caregivers for small children. They can choose the length of their childcare leave until the child turns three and can expect to receive publicly subsidised day care when they decide to return to work. During the earnings-related parental leave, the reimbursement level is based on the earnings pre-birth, while a flat-rate home care allowance is paid if the childcare leave is extended. The level of home care allowance depends on how many children are cared for at home. In 2004–2014, families received around €400 a month on average, while the allowance per child varied between €260 and €290 (measured at 2014 prices) (Kela 2015). The number of municipalities offering supplements, as well as the level of those supplements, have varied over the years (for more information, see, e.g., Österbacka and Räsänen 2022; Table 4). These characteristics of childcare subsidies offer variations in reimbursement levels, which contribute to variations in leave lengths. Higher reimbursement levels lead to longer childcare leaves (Kosonen 2014; Österbacka and Räsänen 2022).

A distinctive feature of the Finnish labour market is that it is highly gender-segregated: women are more likely to work in the public sector, while men dominate in the private sector. In 2019, in public dominated fields such as health and social services and education, 85% and 68% of the employed were women, respectively. Correspondingly, in construction, a highly private-sector-dominated field, 91% of employees were men. Furthermore, the share of men in transportation and industry was 81% and 75%, respectively (Tilastokeskus 2021).

The number of children women receive may be related to occupation, industry, and sector. There is a negative relationship between the level of education and number of children among women born in the 1960s and 1970s in Finland (Jalovaara et al. 2019; Jalovaara et al. 2022). The educational gradient is small and becomes almost non-existent among those giving birth to their first child around 2010. In addition, mothers with higher education are more likely to give birth to another child than mothers with primary education in the 2010s (Comolli et al. 2021), i.e., around the time when our sample gives birth. The fertility-decline in the 2010s in Finland seem to be related to the economic uncertainty women experience in different educational fields (Hellstrand et al. 2022).

Data and methods

To empirically study the association between workplace characteristics and childcare leave length, we use a Finnish sample. Our original sample consists of a 70% simple random sample of all new maternity leaves from 1997 to 2017. The data are drawn from administrative registers of the Social Insurance Institution of Finland (Kela) and Statistics Finland, providing accurate earnings and demographic information. The individuals are linked to their employers by adding occupational and workplace information. We limit our main analytical sample to employed mothers pre-birth who gave birth to their first child between 2006 and 2011. Self-employed and entrepreneurs are excluded from the sample. We deduce the mothers' employment status before childbirth from occupational status based on main employment during the last week of the year[1]. Our initial sample had 119,752 observations, where 75.5% were wage earners, 2.6% were self-employed, and 22.0% were classified as other. In addition, we exclude observations where the number of employees could not be calculated from the data (2,005 cases), cases where industry classification is missing (24 cases), and cases where the sector of the workplace is unknown or other than private corporation, state, or municipality (133 cases). Furthermore, since we are interested in the peer effects, we exclude observations where fewer than four women in the workplace have childcare leaves (21,562 cases). Hence, the sample is not representative of small workplaces. Our sample had 78,507 wage and salary earners, and our final sample consists of 54,783 observations.

Since most women use 8–9 months of earnings-related parental leave, we focus on childcare leaves after parental leave, which have more variation. We define the duration of childcare leave based on the monthly home care allowance payments paid to the mother. However, there are two potential sources of measurement error. First, the beginning and the end of the care leave may be partial months, which will introduce some inaccuracy. Second, other family members, such as grandparents, may care for the child while the mother works. The benefit is still paid to the mother, which could introduce measurement error to our main outcome variable. However, grandparental care is relatively rare in Finland and unlikely to affect the estimates.

We calculate cumulative childcare leaves six years after the first childbirth for our analytical sample (2006–2011) by using information on home care allowance payments. This way we include the childcare leaves for subsequent births within six years after the first birth. Since some mothers never use any home care allowance, we include zeros in the outcome variable. Similarly, we calculate the peers' average childcare leave at the workplace level from individual level data. First, we calculate cumulative childcare leaves three years after childbirth for all women in the sample (1997–2011). Second, we calculate annual workplace-level averages for all workplaces in the sample. Lastly, this average is linked to the mother's workplace the year before childbirth. In all cases, focal mothers are excluded from calculation of averages to avoid endogeneity between variables. We use childcare leave per child among peers to avoid downward measurement errors due to job changes.

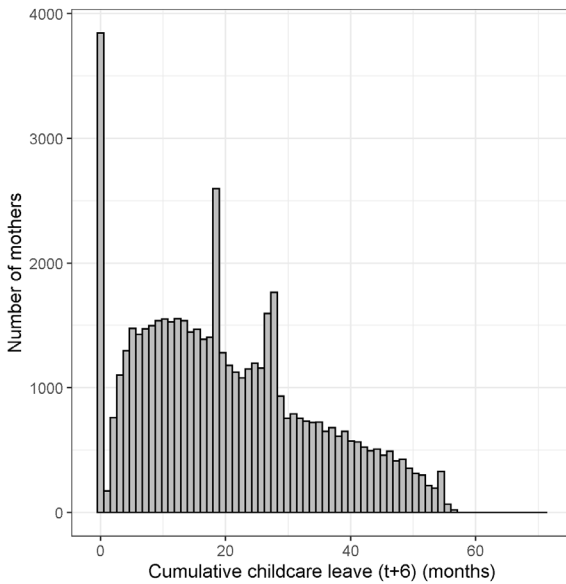1   amas1 variable in Statistics Finland's FOLK modules.

Figure 1. *The distribution of cumulative childcare leaves measured six years after the first childbirth in months.*

Notes: The distribution of cumulative childcare leaves measured six years after the first childbirth in months for sample employed women who give birth between 2006 and 2011. Months with three or fewer observations are excluded from the figure.

Figure 1 shows the distribution of cumulative childcare leaves measured six years after the first childbirth in months. The distribution is slightly positively skewed, as some mothers in the sample have several children or relatively long childcare leaves. This does not seem to affect the results (i.e., when we estimated models with the square root of the outcome variable, the results remain similar). In addition, the distribution has a few distinctive increases at 0, 19, 27, 28, and 55 months. The first jump is explained by women who do not use home care allowance after parental leave; approximately 7 percent of women in the sample do not use any home care allowance during the six-year follow-up. On the other hand, some women use the maximum available home care allowance, with distinctive increases at 19, 27, 28, and 55 months, which are all explained by mothers using the maximum duration of home care allowance (until the youngest child is three years old). Twin births explain the most peculiar increases at 19 months: families with multiple births receive 60 additional days (10 weeks) of parental leave from the second child onwards, which decreases the time on home care allowance.

　　Table 1 shows the background characteristics of the main analytical sample by the proportion of women in the workplace. Mothers work mainly in a gender-segregated labour market. In our sample, the share of women at the workplace level is 73%, on average. Most mothers work in female-dominated workplaces, and only a small share work in male-dominated workplaces. The municipal and private sectors are the main employment sectors in female-dominated workplaces. In gender-balanced workplaces, the private sec-

Table 1. *Employed women's background characteristics by proportion of women at the workplace.*

Variable	All	More than 66 %	33 –66 %	Less than 33 %
Controls (t = -1)				
Age	29.39	28.98	30.32	30.63
	(4.64)	(4.62)	(4.62)	(4.31)
Primary education (share)	0.050	0.045	0.063	0.053
	(0.22)	(0.21)	(0.24)	(0.22)
Secondary education (share)	0.34	0.36	0.29	0.26
	(0.47)	(0.48)	(0.45)	(0.44)
Tertiary education (share)	0.61	0.59	0.65	0.69
	(0.49)	(0.49)	(0.48)	(0.46)
Married (share)	0.55	0.53	0.58	0.59
	(0.50)	(0.50)	(0.49)	(0.49)
Yearly earnings	21,448	19,828	24,285	28,079
	(13,455)	(11,918)	(15,597)	(16,440)
Immigrant (share)	0.04	0.04	0.06	0.06
	(0.21)	(0.19)	(0.23)	(0.23)
Peers' average leave (months)	12.77	13.39	11.54	10.53
	(2.71)	(2.35)	(2.95)	(2.69)
Share of women	0.73	0.81	0.52	0.23
	(0.20)	(0.07)	(0.10)	(0.07)
Number of employees	4,828	5,575	2,619	3,943
	(8,462)	(9,338)	(4,800)	(3,943)
Sector: Private (share)	0.49	0.41	0.63	0.86
	(0.50)	(0.49)	(0.48)	(0.34)
Sector: State (share)	0.10	0.04	0.30	0.13
	(0.30)	(0.20)	(0.46)	(0.33)
Sector: Municipality (share)	0.40	0.55	0.07	0.01
	(0.49)	(0.50)	(0.26)	(0.10)
Variables (t= +6)				
Cumulative childcare leave (t+6) (months)	20.17	21.18	18.00	16.95
	(13.87)	(14.02)	(13.28)	(12.84)
Children (t+6)	1.95	1.97	1.90	1.91
	(0.69)	(0.70)	(0.67)	(0.64)
Child spacing (months between 1st and 2nd child)	35.5	35.6	35.7	34.1
	(19.8)	(20.0)	(19.5)	(19.3)
N	54,783	38,844	11,279	4,660

Notes: Averages and standard deviations in parentheses. Peers' average leave was measured when their firstborn child was 3 years old. Mothers' all background characteristics are measured one year before first childbirth.

tor is predominant, but the state sector is more prevalent than in the other classifications of gendered workplaces. The private sector is, in turn, the main employment sector in male-dominated workplaces.

Mothers have similar individual characteristics, irrespective of gender segregation at the workplace level. However, mothers working in male-dominated workplaces have higher yearly earnings and slightly higher education. Furthermore, mothers in gender-balanced and male-dominated workplaces are married to a slightly higher extent and, on average, have relatively fewer children six years after their first birth within the observed period 2006–2011. They also give birth at a slightly higher age than mothers in female-dominated workplaces. Furthermore, child spacing, among those with more than one child, is around one and a half months shorter in male-dominated workplaces compared to others. On average, the peers' earlier childcare leaves and mothers' cumulative childcare leaves are shorter in male-dominated workplaces and longer in female-dominated workplaces, with gender-balanced averages in between. However, the small differences in the number of children or child spacing cannot explain the large differences in cumulative childcare leave lengths in the gender-segregated labour market.

These differences suggest that women in male-dominated workplaces are career-oriented to a higher extent than others; they are slightly older when giving birth to their first child and have shorter cumulative childcare leaves. In addition, they have higher yearly earnings and are somewhat more highly educated, which supports career orientation. On the other hand, they have higher opportunity costs for longer childcare leaves, which may influence their choice of leave length. Furthermore, the culture and norms at workplaces are likely to differ. Masculine norms are likely to be more dominant in male-dominated workplaces compared to gender-balanced or female-dominated workplaces.

If all jobs with similar opportunity costs, such as earnings and education, were valued alike, mothers with similarly paying jobs and similar individual characteristics but different workplace characteristics should use childcare leaves in similar lengths. However, we argue that the opportunity costs are not the only affecting factor when deciding on the length of the leave: workplace characteristics have an effect as well.

To study the association between workplace characteristics and childcare leave length, we estimate the following OLS for the duration of cumulative childcare leave, Y_{it+6}, for individual i who gives birth in year t:

$$Y_{it+6} = X_{it-1}\beta + Z_{it-1}\delta + M_{mt}\gamma + Year_{it} + Ind_{it-1} + Occ_{it-1} + \varepsilon_{it},$$

where X includes individual characteristics, Z includes workplace characteristics, and Mm includes the municipal supplements for home care allowance, which controls some of the variation in the length of the childcare leave. Year fixed effects, *Year*, remove business cycle variation. Industry, *Ind*, and occupation, *Occ*, fixed effects remove industry- and occupation-specific differences. We estimate two models, including a different set of fixed effects. The first model includes year-fixed effects only, which gives rise to population effects. The second model includes all fixed effects, which estimates the within-industry and within-occupation effects.

The individual control variables are age, age squared, education (basic, secondary, tertiary), marital status (married: yes=1), immigrant status (yes=1), and log earnings, all variables measured the year before first childbirth. The level of the municipal supplement is measured the year the first child is born, when the parents have to decide on their childcare leave length at the latest.

In Z, we include the employment sector (private or public sector, which is divided into municipal and state), workplace size, and the average length of home care allowance among peers at the workplace level. We add gender segregation by measuring the share of women at the workplace level. The share of women and average childcare leave length among peers contribute to the attitudes toward motherhood at the workplace level. Both individual and workplace characteristics are measured one year before childbirth, and the municipal supplement is measured the year the child is born, to avoid endogeneity.

Results

The population-level estimates for the association between workplace characteristics and the duration of cumulative childcare leave are presented in Table 2. The estimated coefficients diminish when more workplace characteristics are included. In addition to the relationship between individual characteristics, which are not shown in the table, mothers working in the private sector or employed by the state use around two months less cumulative childcare leave than mothers employed by municipalities. If peers at the workplace spend, on average, one additional month on childcare leave with their child, mothers are inclined to increase their cumulative childcare leave by almost half a month. If the share of women or the number of employees at the workplace level increases, mothers use longer childcare leaves. For instance, the coefficients in column 4 show that a 10-percentage-point increase in the share of women at the workplace is associated with cumulative childcare leaves extending by 0.3 months. If, on the other hand, the number of employees differs by 10% (e.g., 10 employees vs. 11, or 100 vs. 110, or 200 vs. 220), the leave length is 0.02 months longer in the larger workplace. Similarly, if the number of employees differs by 100% (e.g., 10 employees vs. 20, or 100 vs. 200, or 200 vs. 400), the leave length is 0.2 months longer in the larger workplace. Even though these effects are not large, they are significant and contribute to different outcomes in different workplaces. In addition, the results show that the gender-segregated labour market is related to the childcare leave length.

The coefficients for workplace characteristics in the within-industry and within-occupation models are presented in Table 3. In these models, the individual characteristics are also controlled but not presented in the table. The coefficients for the peers' average leave length and number of employees are quite stable between the two models, while the coefficients for the share of women become somewhat smaller. The difference between sectors becomes smaller as well. For instance, the coefficients in column 4, where all workplace characteristics are included, show that childcare leaves are approximately one

Table 2 *Association between workplace characteristics and duration of cumulative childcare leave (population effects).*

	(1)	**(2)**	**(3)**	**(4)**
Peers' average leave		0.479***	0.429***	0.418***
		(0.023)	(0.024)	(0.024)
Share of women			2.660***	3.014***
			(0.343)	(0.349)
Log (number of employees)				0.202***
				(0.0338)
Sector: Private	-2.933***	-2.386***	-2.000***	-1.605***
	(0.127)	(0.129)	(0.138)	(0.157)
Sector: State	-3.192***	-2.323***	-1.813***	-1.568***
	(0.210)	(0.213)	(0.223)	(0.227)
R^2	0.039	0.046	0.048	0.048
N	54,783	54,783	54,783	54,783

Notes: All models include full controls, and year fixed effects are included. The reference group for sector is "municipality". The share of women is centred at the middle by subtracting 0.50 from the variable. Standard errors in parentheses. *p<0.1; **p<0.05;***p<0.01.

Table 3. *Association between workplace characteristics and duration of cumulative childcare leave (within-industry and within-occupation effects).*

	(1)	**(2)**	**(3)**	**(4)**
Peers' average leave		0.423***	0.404***	0.392***
		(0.025)	(0.025)	(0.025)
Share of women			1.983***	2.339***
			(0.436)	(0.442)
Log (number of employees)				0.193***
				(0.040)
Sector: Private	-1.693***	-1.466***	-1.420***	-0.941***
	(0.194)	(0.194)	(0.194)	(0.218)
Sector: State	-1.890***	-1.267***	-1.035***	-0.785***
	(0.247)	(0.249)	(0.254)	(0.259)
R^2	0.049	0.054	0.054	0.055
N	57,783	54,783	54,783	54,783

Notes: All models include full controls. Models include year, occupation, and industry fixed effects. The reference group for sector is "municipality". The share of women is centred at the middle by subtracting 0.50 from the variable. Standard errors in parentheses. *p<0.1; **p<0.05; ***p<0.01.

month shorter among mothers working in the private sector than among those working in the municipal sector. The difference between mothers employed by the state and by a municipality is even smaller. However, in addition to controlling for individual characteristics, workplace characteristics still matter for cumulative childcare leave length when estimating the within-industry and within-occupation effects.

Mothers within the same industry and occupation are compared by including industry and occupation fixed effects. Hence, the model accounts for self-selection into industry and occupation pre-birth. Self-selection into industry and occupation do not seem to have any large impact on cumulative childcare leave length, as the coefficients do not change that much between the models. Peers are still associated with the leave length, irrespective of the choice of industry and occupation pre-birth. The coefficients related to the employment sector diminish, implying that future mothers, to some extent, self-select into the sector of employment pre-birth.

Do the associations between workplace characteristics and childcare leave length vary between sectors? Table 4 presents the within-industry and within-occupation effect results for workplace characteristics separately per employment sector. By comparing the results to column 4 in Table 3, we note that the association between cumulative childcare leave length and peers' average leave is much stronger among municipal employees than among employees in other sectors. The share of women at the workplace is more important in the public sector than in the private sector. Furthermore, the importance of the number of employees diminishes and becomes insignificant in the state, significant only at 10%-level in municipalities, and significant at 1%-level in the private sector but somewhat lower than the coefficient in Table 3, column 4. In the private sector, the co-efficients are closer to the coefficients in Table 3, column 4, but the coefficient for peers' average leave is lower.

Table 4. *Association between workplace characteristics and duration of cumulative childcare leave by sector (within-industry and within-occupation effects).*

	(1) Private	(2) Municipality	(3) State
Peers' average leave	0.238***	0.688***	0.276***
	(0.032)	(0.052)	(0.087)
Share of women	2.285***	4.098***	3.526***
	(0.515)	(1.543)	(1.232)
Log (number of employees)	0.154***	0.137*	0.157
	(0.056)	(0.073)	(0.134)
R²	0.042	0.056	0.083
N	27,048	22,125	5,610

Notes: The sample is split into subgroups by sector. All models include full controls. Models include year, occupation, and industry fixed effects. The share of women is centred at the middle by subtracting 0.50 from the variable. Standard errors in parentheses. *p<0.1; **p<0.05; ***p<0.01.

If the number of children a mother receives is related to workplaces, does parity drive the results? We split the sample by parity six years after the first birth within the observed period, 2006–2011, and estimate models separately by parity. The results are presented in Table 5. We note that the differences between sectors become smaller and reach lower significance levels. Cumulative childcare leave length is, to a lower extent, driven by the employment sector. The other workplace characteristics, peers' average leave, share of women, and number of employees are less associated with the leave length among mothers with one child, but their importance increases among mothers with two or more children.

The coefficients related to the employment sectors, as well as their significance levels, diminish when the sample is divided into parity. The estimated larger standard errors can be due to the reduced number of observations. However, peer effects are still significant and important, especially for higher-order parities. Hence, the results are more in line with self-selection into employment sector pre-birth, while the associations between workplace characteristics and cumulative childcare leave length are stronger for higher parities.

Table 5. *Association between workplace characteristics and duration of cumulative childcare leave by parity (within-industry and within-occupation effects).*

	(1) 1 child	(2) 2 children	(3) 3+ children
Peers' average leave	0.286***	0.411***	0.565***
	(0.034)	(0.032)	(0.064)
Share of women	1.749***	2.873***	3.289***
	(0.580)	(0.557)	(1.136)
Log (number of employees)	0.071	0.279***	0.414***
	(0.053)	(0.050)	(0.102)
Sector: Private	-0.637**	-0.742***	-0.704
	(0.291)	(0.275)	(0.553)
Sector: State	-0.599*	-0.748**	-0.733
	(0.351)	(0.322)	(0.698)
R^2	0.073	0.065	0.078
N	12,954	32,587	9,242

Notes: The sample is split into subgroups by number of children six years after first childbirth. All models include full controls. Models include year, occupation, and industry fixed effects. The reference group for sector is "municipality". The share of women is centred at the middle by subtracting 0.50 from the variable. Standard errors in parentheses. *$p<0.1$; **$p<0.05$; ***$p<0.01$.

Conclusions

In the Nordic countries, women participate in the labour market almost to the same extent as men. However, combining career and family is not a straightforward task among mothers. Publicly subsidised childcare leaves and day care alleviate the combination. Still, mothers take the main responsibility for childcare. Therefore, they may have sluggish careers that contribute to the gender pay gap. After childbirth, mothers reduce their labour market participation. The subsequent reductions in earnings are heterogeneous but related to adjustments to childcare obligations (Lundberg and Rose 2000). The importance of the reduced earnings due to motherhood for the gender pay gap has increased (Kleven et al. 2019). The childcare leave length seems to be a significant contributing factor to the level of reduction in earnings.

We have studied the association between workplace characteristics and cumulative childcare leave length and stressed the importance of peers in a gender-segregated labour market. In our empirical analyses of variations in cumulative childcare leave length, age, mother's marital status, immigrant status, education, and earnings pre-birth are controlled for. The last two are the most evident measures of opportunity costs for childcare leaves. In addition to those, and the variables of interest, workplace characteristics and the length of childcare leaves among peers have independent associations with childcare leave length.

Overall, the coefficients for peers' leave length on cumulative childcare leave length is significant, irrespective of employment sector and parity. The peer-coefficient is somewhat higher among mothers employed in municipalities and among mothers with more than one child. In addition, there are significant differences in cumulative leave length among mothers employed in different sectors. Mothers employed by municipalities use longer childcare leaves than others do. The estimated results change somewhat between the population model and the within-industry and within-occupation models. However, the coefficients for peers and the employment sector are still significant and meaningful when sorting into industry and occupation pre-birth is considered.

The share of women at the workplace level and the number of employees are independently associated with longer childcare leaves in all estimated models. In these workplaces, future mothers are likely to interact more with mothers and learn about their experiences of childcare leaves. If the share of women at the workplace is high, the employer may also be more familiar with the process of finding replacements for mothers on leave. In addition, it may be easier to find replacements for the mother on leave or rearrange work tasks in larger workplaces. The share of women in the workplace is an indication of the level of gender segregation. The pure segregation effect is not that large in itself. But, considering that occupations in municipalities were highly female dominated until 2022[2] and that mothers employed by municipalities used longer childcare leaves, there are far-ranging effects of gender segregation for childcare leave length.

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2   The responsibility for healthcare and social welfare services was transferred to wellbeing service counties in January 2023.

The differences between sectors are in line with the differences in the setting of wages. In the private sector, the individualised wage setting is more decisive for the wages than in the public sector. Furthermore, occupations in the public sector with a high share of women, i.e., health and social services and education generally have specific qualification requirements. By fulfilling the requirements, the employee usually receives a specific task, and promotion is not necessarily straightforward. Mothers employed in these occupations have fewer possibilities to be promoted. In addition, the qualification requirements are usually met by formal education, which does not deteriorate during childcare leave. Hence, mothers employed in these occupations generally have less to lose when taking long childcare leaves. In addition, our results are in line with a certain extent of self-selection into the sector of employment pre-birth. Occupations predominantly in municipalities, where the wage level is not penalised after (long) childcare leaves are favourable for mothers.

A limitation of the empirical analyses is that they do not offer causal interpretation. We estimate associations. However, previous research shows that peers have causal effects on the length of childcare leave (see Dahl et al. 2014; Welteke and Wrolich 2019). Finland shares similarities with other Nordic countries in how family policies are arranged, and, thus, belongs to the context of a Nordic welfare state. However, Finnish family policies also deviate from the other Nordics when it comes to the provision and high use of home care allowance. The Finnish labour market is, in addition, highly gender-segregated. Hence, the context may influence our results, and outcomes in countries with different circumstances may deviate from our results.

Mothers working in the gender-segregated Finnish labour market use different childcare leave lengths conditioned on workplace characteristics and peers. The independent associations of workplace characteristics and peers show that the social environment influences the childcare leave length. Workplace characteristics offer different opportunities to combine family and career, indicating that culture and norms at workplaces differ. Furthermore, the results are in line with the implications of the model presented by Walker (1995). Variations in the demands for human capital and corresponding wage levels at workplaces affect the choice of leave length. These differences contribute to heterogeneous childcare leave lengths.

Several relatively small factors influence the gender pay gap, which may accumulate large differences between men and women during the life course. Women choose different occupations, industries, and employment sectors than men, which increases gender segregation. Differences at workplace levels are related to variations in childcare leave lengths. Childbirth, childcare, and related career interruptions contribute to the gender pay gap. This paper adds a piece to the puzzle by demonstrating how childcare leaves and gender segregation interact.

In summary, the gender-segregated labour market is associated with variation in childcare leave lengths, which has implications for labour market outcomes post-birth. Consequently, the gender-segregated labour market is associated with the gender pay gap. As such, peer effects and gender segregation are important mechanisms behind childcare leaves lengths. Leave lengths, in turn, have consequences for the gender pay gap. In the 2020s, new mothers and fathers in Finland are exposed to gender egalitarian family

policies, which may influence their peers, the potential future mothers and fathers. Peers at the workplace are influenced cumulatively; the peer effect in parental leave decisions increases over time (Dahl et al. 2014). Family policies may slowly change norms and, in turn, reduce the gender gap in the division of childcare and pay. A more gender-egalitarian division of childcare leaves could change the course of the peer effects, change social norms at the workplace level, and in turn affects the gender pay gap over time.

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