PARENTAL LEAVE EQUALITY AND SUBJECTIVE WELL-BEING

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Abstract

This study uses data from Sweden to investigate the proportional distribution of parental leave days between parents and to analyze how this "parental leave equality" may be related to the parents' subjective well-being. Three results are presented. First, there is no linear relationship between the *total share of leave days* taken by an individual and that individual's subjective well-being; in other words, more parental leave is not unequivocally better. Second, and by contrast, there seems to be a significant relationship between *parental leave equality* and subjective well-being, which implies that parents who share the responsibility for childrearing more equally tend to be more satisfied with their lives. Third, a very simple and tentative analysis of a Swedish parental leave reform suggests that incentivizing parents to share leave days more equally potentially could have improved their subjective well-being.

JEL classification: D63, E24, I14, J16, J22, J38, K38

1. Introduction

Many studies have investigated the impact of paid parental leave laws on labor market outcomes. These investigations have found, among other things, that parental leave may improve labor force participation (Byker, 2016); reduce turnover rates at work (Appelbaum and Milkman, 2011); and increase wages (Baum and Ruhm, 2013). In addition, there are also documented social effects of parental leave schemes, such as reduced infant mortality (Shim, 2013); lower high school dropout rates (Carneiro et al., 2015); and improved relationships between parents and their kids (O'Brien, 2009). However, most of these studies tend to focus on the effects of the leave policies in general or on the average take-up of paid leave days. But an open question remains as to whether the distribution of leave days between parents has any material impact—economic, social, or otherwise. This question is the scope of this paper.

There are several reasons why one may hypothesize that the distribution of paid leave days, or "parental leave equality," would matter. Research on other topics has shown that inequality in incomes, for example, is negatively related to subjective well-being (Ifcher et al., 2016). With respect to gender inequality in domestic work, Pia Schober (2013) reports that inequality reduces relationship stability among mothers, and Lisa Harryson et al. (2012) find that inequality is associated with psychological distress. Some studies suggest that there may be spillover effects from parental leave equality, and that increased leave uptake among fathers may improve overall equality in domestic work (see, e.g., Duvander and Johansson, 2015). If that proposition is true, one might hypothesize that parental leave equality has a similar positive impact as the one found by Schober and Harryson et al. This study seeks to explore that hypothesis.

2. Parental leave equality

The distributional gap in leave days between parents is a topic that so far, unfortunately, has received little scholarly attention. Castro-García and Pazos-Moran (2016) have conducted a study that is somewhat related to the present inquiry.[1] Their study develops an index that ranks countries according to how well national parental leave policies bridge the gendered division of labor. However, their paper concentrates on quantifying parental leave policies rather than on linking parental leave equality to social outcomes, which is the purpose of this study. In addition, they look at country-level rather than individual-level data.

The present study investigates the relationship between parental leave equality and parental subjective well-being. It does so in the context of a paid parental leave reform that was implemented in Sweden in 1995. Before the reform, Swedish parents were entitled to 450 paid parental leave days for their first child and 360 days for each subsequent child. Parents could freely dispose of the days between them (e.g. transfer all of their allowance to the other parent), which resulted in women taking more than 90 percent of the total number of parental leave days. To address the issue of parental leave equality, the Swedish government decided to introduce a quota that reserved 30 days for each parent, which could not be transferred to the other parent.[2] This significantly increased the uptake of parental leave days among men and sought to encourage gender equality at home as well as in the labor market.

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[1] Despite the lack of similarities, it is still one of the few studies that is related to this paper, which illustrates the lack of inquiries into the topic of parental leave equality.

[2] If a parent decided not to take its reserved 30 days, that part of the benefit was forfeited, which created an incentive for parents to use at least their reserved quotas.

3. Empirical framework

The following regression equation expresses the primary relationship of interest:

$$SubjectiveWellBeing_{it} = \alpha + \beta ParentalLeaveEquality_{it} + \delta \chi_{it} + \theta Wave_t + \varepsilon_{it} \quad (1)$$

where *SubjectiveWellBeing* measures well-being on a three-point scale; *ParentalLeaveEquality* is the proportion of total leave days taken by the one parent in a couple who has taken the smallest share (0 thus denotes perfect inequality and 50 denotes perfect equality); χ is a vector of demographic, economic, and social covariates, such as gender, income, age, parental education level, number of children living at home, and partner's occupational status; and *Wave* denotes time-fixed effects.

4. Data

The data is drawn from two waves of the Swedish Level of Living Survey (SLLS), in 1991 and 2000—one wave before the 1995 parental leave reform and one after. The SLLS is conducted roughly once every decade and is based on approximately a 0.1% random sample of the Swedish population aged 15–75. Many of the respondents are interviewed in multiple waves, which makes it possible to construct balanced panel data. The full data set used for the purpose of this study contains 165 variables and data from 6,686 individuals based on 10,449 in-person interviews.

Using the definition provided by Diener (2006, pp. 399–400), subjective well-being is defined broadly as "all of the various types of evaluations, both positive and negative, that people make of their lives." The following question from the SLLS will be used to construct a three-point subjective well-being variable:

> **If you look back over the last ten years, do you think that your living conditions during this time has deteriorated, improved, or remained more or less the same?**
> 1) Deteriorated, 2) Improved, 3) More or less remained the same.

The main independent variable, parental leave equality, is based on self-reported data on how many parental leave days each parent has taken for each child, which makes it straightforward to compute the share of total days taken by the parent who has taken the smallest share.[3] The variable therefore ranges from 0 (perfect inequality) to 50 (perfect equality). Table 1 summarizes the most important variables used in the analysis. One may note, for instance, that the degree of parental leave equality was very low; the average couple distributed their leave days approximately 92.5/7.5.

Table 1: Summary statistics

|	Full sample (unbalanced panel data) N=10,449				
Variable	**N**	**Mean**	**Std. Dev.**	**Min**	**Max**
Subjective well-being	10,347	2.37	0.71	1	3
Parental leave share	1,800	55.00	43.58	0	100
Parental leave equality	1,800	7.56	11.05	0	50
Parental leave days	1,876	40.02	48.41	0	366
Female	10,449	0.49	0.50	0	1
Single	10,449	0.32	0.47	0	1
Mother	10,449	0.20	0.40	0	1
Mother w parental leave	10,449	0.09	0.29	0	1
Recent mother	10,449	0.14	0.35	0	1
Child after 1995	10,449	0.07	0.25	0	1
Single mother	10.449	0.03	0.17	0	1
Age	10,449	44.21	15.90	18	76

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[3] The bulk of the analysis is restricted to non-single parents.

The level of inequality may seem incongruous with the parental leave share figure, which has a mean of 55, implying that the average respondent took about 55% of all leave days. But this is merely a result of averaging the uptake across all respondents, which naturally includes individuals who take most of the leave days and individuals who take very few leave days.[4]

5. Results

The analysis suggests that there is a positive relationship between parental leave equality and subjective well-being. Figure 1 graphically shows this basic result. Because subjective well-being is only measured on a three-point scale, it is not easy to see the relationship based just on a scatter plot. However, the quadratic, inverted-U-shaped trendline makes it plain that respondents who take a more equal share of the total number of parental leave days tend to experience higher levels of subjective well-being.

Figure 1: Parental leave equality and subjective well-being (panel data and non-single parents)

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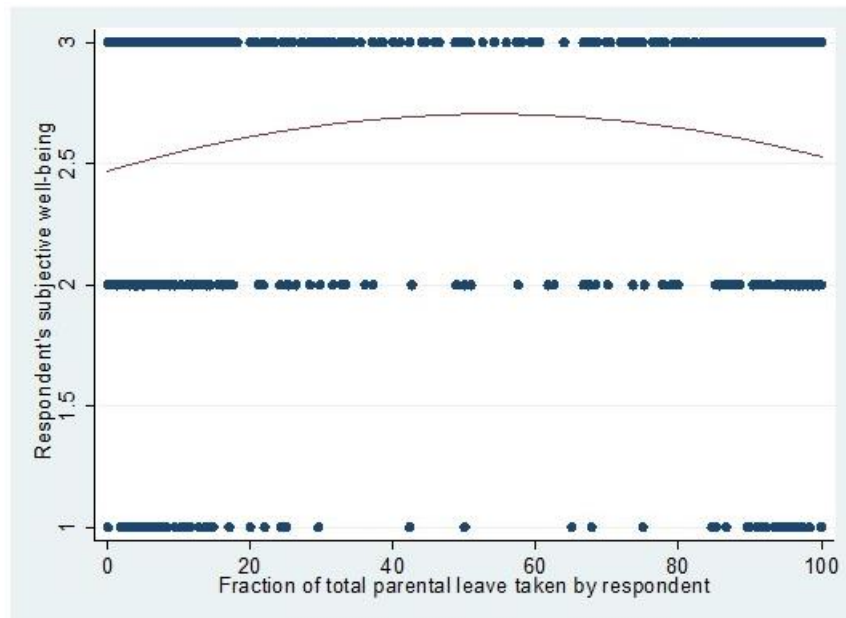
[4] A perfectly representative sample of couples with children would result in an average of 50, which clearly says nothing about the distribution between parents.

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This association is further supported by the regression analyses in Table 2. The outcome variable for each of the nine specifications is subjective well-being. The analysis is restricted to panel data and parents who are not single. Columns (1) and (2) report no significant *linear relationship* between parental leave share and subjective well-being. In other words, parents who take a greater share of parental leave days do not appear to experience higher levels of well-being than those who take a smaller share. However, Column (3), where a quadratic variable is added, shows a significant relationship, which in line with Figure 1 suggests that the relationship is *non-linear*. Columns (4) through (9) report various results of regressing subjective well-being onto parental leave equality (again, the lowest share of parental leave days taken by either parent) with different sets of covariates. In each specification, there is a positive, significant relationship between the two primary variables of interest.

Table 2: Parental leave equality and subjective well-being (panel data and non-single parents)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Parental leave share	0.000 (0.000)	0.001 (0.001)	0.009*** (0.002)						
(Parental leave share)^2			−0.000*** (0.000)						
Parental leave equality				0.005*** (0.002)	0.005*** (0.002)	0.004*** (0.002)	0.003** (0.002)	0.003** (0.002)	0.003** (0.002)
Parental leave days		−0.000 (0.001)			0.000 (0.000)	0.000 (0.000)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Time fixed effects	NO	NO	NO	NO	NO	YES	YES	YES	YES
Demographic and household controls	NO	NO	NO	NO	NO	NO	YES	YES	YES
Occupational dummy variables	NO	NO	NO	NO	NO	NO	NO	YES	YES
Partner's occupational dummy variables	NO	NO	NO	NO	NO	NO	NO	NO	YES
N	1,372	1,372	1,372	1,372	1,372	1,372	1,354	1,308	1,268

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Robust (clustered) standard errors in parentheses.

After first computing the significance levels, all values in the table were rounded off to three decimal points.

Demographic and household controls include the respondent's gender, age, age^2, educational level, father's educational level, mother's educational level, salary, salary^2, smoking habits, and drinking habits; the number of children living in the respondent's household; and the age of the respondent's youngest child. Occupational dummy variables are a set of mutually exclusive and collectively exhaustive dummy variables indicating the respondent's occupational status. Partner's occupational dummy variables are a set of mutually exclusive and collectively exhaustive dummy variables indicating the respondent's partner's occupational status.

The coefficients imply that the relationship between parental leave equality and subjective well-being, albeit significant, is limited in magnitude. This should be expected, in part because the variation in the subjective well-being variable is so small, and in part because there are so many other factors that affect an individual's subjective well-being. Nonetheless, the finding is noteworthy, particularly in the light of the insignificant result between parental leave

share and subjective well-being. However, it must be stressed that the reported relationship merely demonstrates correlation. The extent to which there is causation, and in what direction the causal effect in that case might go, are both open questions. It is possible that parents who display a higher level of subjective well-being are more likely to share parental leave days more equally.

In theory, one could study single parents who had children both before and after the 1995 reform and compare their subjective well-being levels to those of non-single parents who also had children both before and after the reform. This would result in a Difference-in-Differences analysis where non-single parents are the ones who were affected by the reform and single parents serve as the comparison group, since they were ineligible for the reform. However, the dataset used in this paper unfortunately does not contain a sufficient number of observations for such an analysis.[5] For this reason, Figure 2 only offers a highly tentative comparison of differences in average subjective well-being levels between non-single parents and single parents who had children before and/or after 1995.

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[5] The problem is that only a small proportion of respondents are single parents, and yet an even smaller proportion of single parents had children (while remaining single) both before 1995 as well as after 1995.

Figure 2: Subjective well-being for eligible and non-eligible parents (unbalanced panel data)
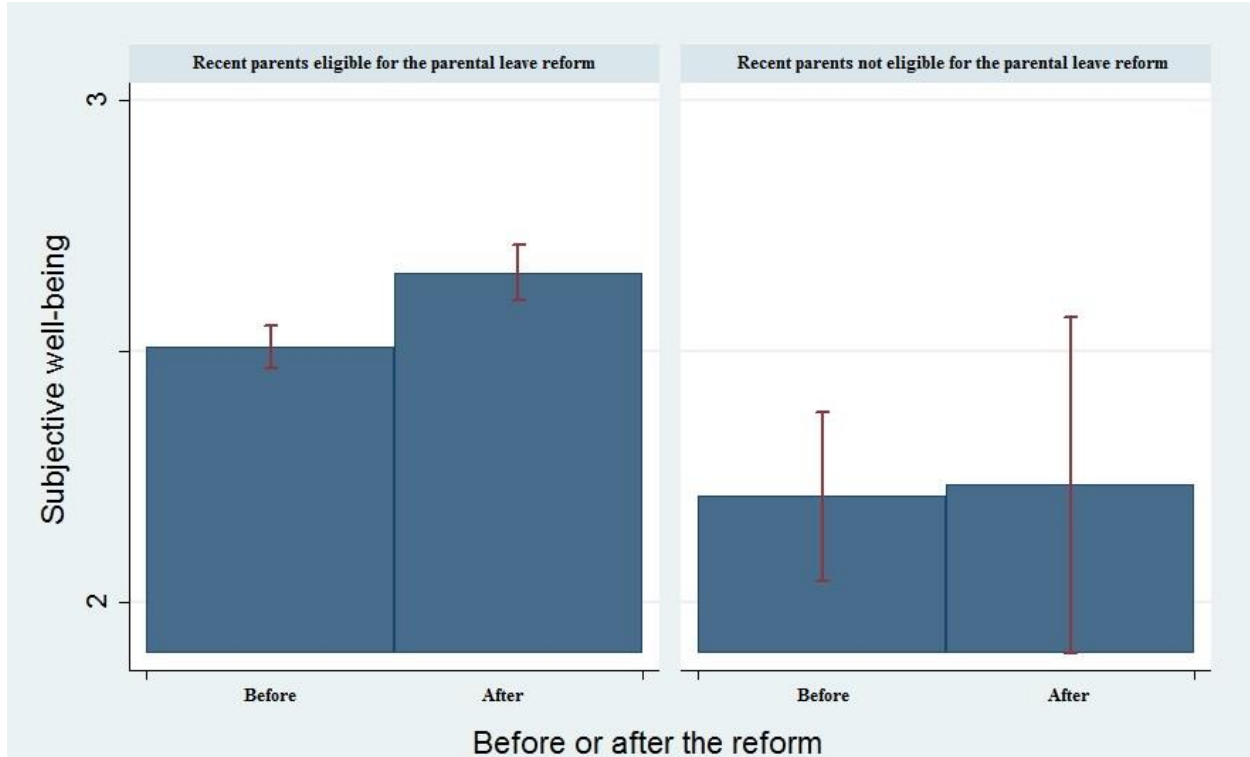
The capped spikes in the chart show the 95% confidence intervals. In the left half, the two intervals do not overlap, and the difference in means is thus statistically significant. In the right half, the difference is not significant.

In Figure 2, a recent parent is defined as someone who had a child between 1986 and 1991 and/or between 1995 and 2000. Figure 2 should therefore be interpreted as follows. In the left half, the two bars compare the difference in subjective well-being between non-single parents who had children in the six years prior to the first wave of the survey and those who had children in the six years leading up to the second wave. It is important to note that these in many instances are not the same respondents (i.e. unbalanced panel data). The statistically significant difference in means between the two groups does therefore not suggest that the well-being of the same individuals increased over time; the gap only suggests that the well-being among non-single parents was higher in 2000 than it was in 1991. This should then be contrasted with the right half of the figure, which shows no significant difference in well-being between single

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parents who recently had had children in 1991 and single parents who recently had had children in 2000.

Why did recent non-single parents in 2000, who were eligible for the parental leave reform, have significantly higher levels of subjective well-being than recent non-single parents in 1991, before the reform was introduced? Perhaps it was easier to be a parent in 2000 than in 1991. But, if so, then single parents in 2000 should presumably have seen a higher well-being level than single parents in 1991. So, there seems to have been factors that positively affected non-single parents, but not single parents. There are many policies and events that may constitute such factors, and one of them is the 1995 parental leave reform. Since it is beyond the scope of this study to investigate that possibility further, this is an excellent topic for future research to pursue.

In sum, while Figure 2 cannot offer any evidence that the parental leave reform had a causal effect on subjective well-being, the result is still noteworthy in light of the research in other contexts that has found that single mothers over the past few decades generally have seen larger increases in their average well-being relative to non-single mothers (see, e.g., Ifcher and Zarghamee, 2004)—in other words, a finding exactly the opposite to this one.

6. Conclusion

Because the data used in this study is highly limited both across time and space, the findings must be interpreted with great caution. It is up to future research to confirm or reject the tentative finding that parental leave equality truly is positively related to subjective well-being. If it turns out that this relationship is real then the subsequent questions are, first, in what contexts the relationship exists and, second, to what extent it is causal.

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