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Family policies, women's earnings, and betweenhousehold inequality: Trends in 18 OECD countries from 1981 to 2005

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# LIS Working Paper Series

No. 599

## Family Policies, Women's Earnings, and Between-Household Inequality: Trends in 18 OECD countries from 1981 to 2005

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November 2013



Luxembourg Income Study (LIS), asbl

## Family Policies, Women's Earnings, and Between-Household Inequality: Trends in 18 OECD countries from 1981 to 2005

Rense Nieuwenhuis, Ariana Need, Henk van der Kolk<sup>3</sup> November 6, 2013

#### Abstract

This paper examines to what extent family policies have affected earnings inequality within and between coupled households. Previous studies had found cross-country variation in the degree to which women's earnings attenuate earnings inequality between households. In this paper we explain this variation with reconciliation policies and financial support policies. We used person-level data from the Luxembourg Income Study (LIS, 2013) on 572,222 coupled households, covering the period from 1981 to 2005 in 18 OECD countries. These data were combined with country-level data from the Comparative Maternity, Parental, and Childcare Database (Gauthier, 2010). In countries with extensive reconciliation policies women contributed a larger share of total household earnings, and earnings inequality among women was relatively low. In societies with extensive financial support policies, women contributed a smaller share to total household earnings, and inequality among the earnings of women was relatively high. Women's earnings were found to attenuate inequality between households to a larger extent in countries with extensive reconciliation policies and limited financial support policies. Countries with family policy arrangements that facilitate women's employment and consequently smaller earnings inequalities within households also contribute to smaller inequalities between households.

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## 1 Background and Research Question

Reconciliation policies have been shown to have stimulated women's employment in OECD countries in recent decades. Reconciliation policies had been shown to reduce the gap in employment between mothers and women without children (Nieuwenhuis et al., 2012a). It was shown that the rise in women's employment was explained not only by the implementation of family policies and other contextual factors (Charles, 2011; Gornick et al., 1998; Jaumotte, 2003; Matysiak & Vignoli, 2008; Pettit & Hook, 2005), but also by demographic determinants such as women's rising educational levels (Bradley, 2000) and decreasing fertility (Van der Lippe & Van Dijk, 2002).

Other authors have challenged the idea that family policies have uniform effects on the earnings of women across more and less educated women (Mandel, 2012). For instance it was found that family policies selectively benefit those already in a strong position to have high earnings and consequently exacerbate earnings inequalities at the household level (Ghysels & Van Lancker, 2011; Lancker & Ghysels, 2012). The take-up of the benefits offered by reconciliation policies was found to be biased against low-income families (Ghysels & Van Lancker, 2011). Dual earnership was found to be less common among couples with low earnings capacity (Cantillon et al., 2001).

The increased employment of women has been characterised as a polarisation between work-rich and work-poor households, because more educated women are more likely to be employed and have higher earnings and family policies have stratified outcomes. It was hypothesised that this resulted in an exacerbation of earnings inequalities between households (Esping-Andersen, 2007, 2009; McCall & Percheski, 2010).

In this paper we challenge the assertion that earnings inequality between households has increased as a result of the implementation of family policies. We do so on three accounts.

Firstly, not all family policies have been found to facilitate women's employment. A distinction between reconciliation policies and financial support policies has been identified (Gauthier, 1996; Thévenon, 2011; Thévenon & Luci, 2012). Whereas reconciliation policies such as leave and continued pay during leave were found to increase women's employment by facilitating women to combine motherhood and employment, financial support policies such as family allowances were found to provide women the financial opportunity not to be employed (Nieuwenhuis et al., 2012a).

Secondly, it has been found that as women's participation in specific occupations was rising, wage levels in these occupations were declining (Mandel, 2013). The consequence of this development is that the earnings distribution in these occupations is compressed, contributing to lower earnings inequali-

ties among women.

Finally, it was often found that women's earnings attenuate earnings inequality between households (Gregory, 2009). Women have been gaining a stronger position in the labour market with higher status positions and higher wages (Costa, 2000). As a result of women's stronger position for women in the labour market, earnings inequality between men and women, and within households, decreased (Blau & Kahn, 2000; Charles, 2011; Cancian & Schoeni, 1998; Cancian & Reed, 1999; Harkness, 2013; Jenkins & Van Kerm, 2009; Lam, 1997; Mastekaasa & Birkelund, 2011; Pasqua, 2002). For a detailed discussion of the analysis of how women's earnings affect inequality between households, we refer to Nieuwenhuis et al. (2013b).

To summarise, on the one hand combining institutional and demographic explanations of women's employment has led to the suggestion that family policy outcomes are stratified by educational level, exacerbating earnings inequality across work-rich and work-poor households. On the other hand, it was found that women's rising employment and earnings had an attenuating contribution to between-household inequalities. This juxtaposition warrants further examination of how family policies have affected the degree to which women's earnings affect between-household inequality. In doing so, we contribute substantive explanations of cross-national variation in the degree to which women's earnings attenuate between-household inequalities of earnings. In this paper we improve upon both the literature on family policy outcomes and on the literature on the effect of women's earnings on betweenhousehold inequality by empirically testing to what extent the availability of reconciliation policies and financial support policies can explain differences between OECD countries from 1981 to 2005 in the degree to which women's earnings attenuate inequalities between households:

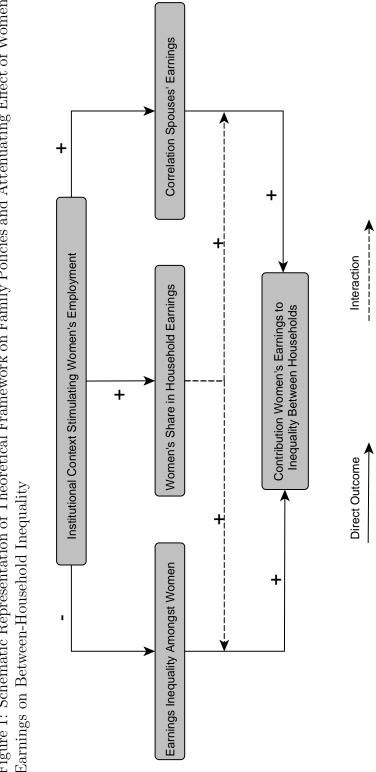
**Explanatory Question** To what extent can cross-national variation in the degree to which women's earnings attenuate inequalities between households in 18 OECD countries from 1981 to 2005 be explained by (a.) reconciliation policies and (b.) financial support policies?

## 2 Theory and Hypotheses

In this section we hypothesise about how reconciliation policies and financial support policies affect the attenuating effect of women's earnings on household inequalities. Our theoretical framework is represented schematically in Figure 1.

The contribution of women's earnings to inequality between households is shown in the bottom row of Figure 1. The degree to which women's earn-

Figure 1: Schematic Representation of Theoretical Framework on Family Policies and Attenuating Effect of Women's Earnings on Between-Household Inequality



ings attenuate (or exacerbate) earnings inequality between households, is determined by (a.) the correlation between spouses' earnings, (b.) inequality among women's earnings relative to men's inequality, and (c.) women's share in total household earnings (Lam, 1997). These three aspects of women's earnings are shown in the middle row of Figure 1. If the correlation between spouses' earnings is positive, higher earnings inequality among women contributes to higher earnings inequality between households. This, however, will only hold when earnings inequality is higher among women than it is among men. Even if earnings inequality among women is greater than it is among men, the correlation between spouses' earnings needs to be much higher than it typically is for women's earnings to exacerbate earnings inequalities between households. It is a "common misconception" (Lam, 1997, p. 1026) that a positive correlation between spouses' earnings is a sufficient condition for women's earnings to increase inequalities between households.

The top row of Figure 1 represents how the aspects of women's earnings outlined above are hypothesised to be affected by institutional contexts. Here, we focus on family policies and how these affect women's employment. If a family policy context facilitates many women having earnings (e.g. if female labour force participation is high), the share that women's earnings contribute to total household earnings is also expected to be high. Also, with high female labour force participation, earnings inequality among women will be low. The reason for this is that the number of women with zero earnings is reduced (Cancian & Reed, 1999; Gregory, 2009). Finally, when women's employment is high and women are likely to have earnings, it is to be expected that the positive correlation between spouses' earnings is stronger. The reason for this last expectation is given by Oppenheimer, who argues that with the stronger position of women in the labour market, the degree of educational homogamy increased because the marriage preferences of men and women converged (1988; 1994). Similarly, Sweeney (2004) found that with the increased participation of women on the labour market, women's pre-marriage income became a more important determinant of partner selection. Our general assumption is therefore that if women's earnings are high in a country, this country has a high share of women's earnings in total household earnings, low inequality among women, and a stronger positive correlation between spouses' earnings.

Finally, we hypothesise about how family policies can affect women's employment, and in turn the attenuating effect of women's earnings on inequality between households. We again distinguish between two types of family policies: reconciliation policies and financial support policies to families.

Reconciliation policies provide opportunities to combine employment and motherhood (Gornick et al., 1998; Jaumotte, 2003; Matysiak & Vignoli, 2008;

Nieuwenhuis et al., 2012a; Pettit & Hook, 2005). For maternity leave, this refers to the relatively short period before and after childbirth, and parental leave provides these opportunities when the child(ren) in the household are very young. Continued pay during leave further facilitates the opportunity to take up leave, without facing the consequences of reduced or no income. Hence, we expect that in a society with extensive reconciliation policies, women's employment and consequently women's earnings will be high:

Reconciliation policy hypothesis In countries with extensive reconciliation policies, (a.) the attenuating effect of women's earnings on between-household inequalities is *stronger* than in countries without extensive reconciliation policies, and (b.) the positive correlation between spouses' earnings is stronger, earnings inequalities among women are lower and women contribute a larger share of total household earnings.

In contrast, we expect that in countries with extensive financial support policies for families with children, women's employment will be lower. Financial support policies were found to also provide the opportunity to women not to be employed (also see: Gauthier, 1996; Thévenon, 2011). Consequently, we hypothesise:

Financial support policy hypothesis In countries with extensive financial support policies to families, (a.) the attenuating effect of women's earnings on between-household inequalities is weaker than in countries without extensive financial support policies, and (b.) the positive correlation between spouses' earnings is weaker, inequality among women are greater and women contribute a smaller share of total household earnings.

## 3 Data and Method

#### 3.1 Person-level Data

Our hypotheses were tested using data from the Luxembourg Income Study (LIS, 2013). We used data on 1,144,444 individuals in 572,222 households, covering 99 country-years from 1981 to 2005 in 18 OECD countries. With these data, we calculated four measures: the (I.) contribution of women's earnings to inequality between households, (II.) correlation between spouses' earnings, (III.) earnings inequality among women, and (IV.) the share of women's earnings in total household earnings. These four measurements are

the dependent variables in our analyses. Descriptive statistics by country were presented in Table 1.

Income variables in the Luxembourg Income STudy were reported either net of taxes and social security contributions, or gross of taxes and social security contributions. Without accounting for the fact that net and gross earnings are different constructs, these measures cannot be compared. We used earnings net of taxes and social security contributions where available, and when necessary net earnings were calculated by subtracting taxes and social security contribution from gross earnings. The procedures we developed for doing this are described in detail by Nieuwenhuis et al. (2013a).

#### 3.2 Country-level data

We combined the data on four measurements of between-household inequality and aspects of women's earnings with indicators of family policies and institutional context. These contextual data were measured at the level of the country-year, and as such are time-varying.

Paid parental leave Our measure of reconciliation policies is an index of three leave policies: maternity leave, parental leave, and childcare leave. Each leave policy was measured as the number of weeks mothers are entitled to. The number of weeks of each of these leave policies were weighted by the percentage of wages that are paid during this leave. The final measure represents the total number of weeks of leave with full pay. These data were available from the Comparative Family Policy Database (Gauthier, 2010).

Family Allowances Expenditure Our measure of financial support policies is the percentage of GDP a country spends on family allowances. These data were available from the Comparative Family Policy Database (Gauthier, 2010).

In addition, we control for two labour market variables. As the share of women's earnings in total household earnings is strongly dependent upon the female / male wage ratio, we control for this at the country-level. In addition, we control for the overall unemployment level as an indicator of the employment opportunities in an economy and because unemployment is an important determinant of inequality.

Female / Male Wage Ratio Calculated as the hourly wages in manufacturing for women divided by the hourly wages in manufacturing for men. Our measure of financial support policies is the percentage of

Table 1: Descriptive Statistics on Earnings Inequality. Reported values apply to the Min / Max / Mean measurement across country-years, by country. Source: Data from the Luxembourg Income Study (LIS, 2013).

Source: Data Irom the Luxembourg	а пош	ne ruxei		TITCOINE STRUNG (TITC	and) (nna	O, 2010).						
		$\operatorname{Share}$		Wome	Women's Inequality	luality		Correlation	ı		Attenuation	
Country	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
Australia	35.85	41.93	38.92	1.81	3.36	2.67	16.56	36.37	26.72	-42.17	-24.02	-34.82
Austria	28.22	38.84	31.70	2.74	7.17	5.62	6.55	16.78	10.64	-59.79	-19.37	-32.61
$\operatorname{Belgium}$	25.24	39.79	32.28	2.08	8.15	4.80	4.99	23.57	15.38	-30.50	-4.40	-18.26
Canada	23.82	38.91	36.03	2.22	8.82	3.48	7.29	14.76	11.97	-62.13	-15.16	-46.48
Denmark	38.15	43.03	40.84	1.31	2.21	1.68	15.58	22.89	20.02	-54.24	-45.14	-50.53
Finland	41.04	43.06	42.15	1.81	2.57	2.28	22.07	28.95	24.18	-60.07	-49.35	-54.56
France	32.06	40.32	35.93	2.95	6.10	4.61	13.47	20.77	17.39	-52.29	-31.29	-39.45
Germany	4.26	31.04	24.22	3.04	70.19	14.99	-34.96	4.91	-14.51	-59.88	-23.65	-47.06
Greece	26.47	33.36	29.83	10.95	16.90	13.60	15.76	22.98	19.32	-26.01	-19.18	-21.76
Ireland	27.37	41.26	31.31	3.44	10.85	8.24	4.35	14.10	99.6	-69.70	-24.27	-38.86
Italy	23.05	48.71	30.27	2.49	15.97	11.81	15.02	30.92	19.58	-71.14	-6.51	-19.75
Luxembourl 39	11 <del>16</del> .39	25.78	20.90	06.9	18.05	12.44	-1.36	3.45	1.35	-28.07	-6.09	-13.83
Netherland\$4.44	<b>3</b> 4.44	34.28	26.88	1.88	18.65	7.39	-3.35	7.88	1.21	-51.46	-10.52	-32.42
Norway	35.90	39.01	37.91	1.47	2.31	1.81	9.22	17.01	12.77	-65.48	-50.59	-55.10
Spain	15.98	31.86	24.97	8.19	26.72	16.17	11.67	16.09	13.85	-19.00	-0.99	-12.16
Sweden	33.03	39.99	37.24	1.89	2.72	2.23	13.90	27.45	22.00	-41.04	-35.15	-37.59
$\operatorname{United}$	24.33	40.38	34.51	2.10	9.22	3.71	9.44	20.10	15.48	-66.40	-25.80	-42.89
King-												
dom												
United States	27.11	39.01	32.93	4.25	6.35	5.35	-12.19	-0.17	-4.85	-106.42	-48.12	-69.61
Total	4.26	48.71	32.71	1.31	70.19	6.83	-34.96	36.37	12.34	-106.42	-0.99	-37.10

GDP a country spends on family allowances. These data were available from the Comparative Family Policy Database (Gauthier, 2010).

**Unemployment** Unemployment data available from the Comparative Family Policy Database, and defined as the "number of unemployed persons as a percentage of the civilian labour force" (Gauthier, 2010, p. 34).

Descriptive statistics of the country-level data in this paper are presented in Table 2.

Table 2: Descriptive Statistics on Family Policies and Labour Market Controls

Source: Data From the Comparative Family Policy Database (Gauthier, 2010).

		(	· /	
Variable	Min.	Mean	Max.	SD
Paid Leave	0.00	26.99	95.04	22.80
Family Allowance Expenditure	0.08	1.41	3.24	0.74
Unemployment	1.20	7.95	23.00	3.65
Female/Male Wage Ratio	0.54	0.77	0.91	0.08

## 3.3 Statistical Method: Multilevel Model for Change

The data described above will be analysed using the multilevel model for change (Singer & Willet, 2003). This model allows us to analyse the rate of change over time for each of the dependent variables described above for each country separately, and to test whether these are dependent on country-level independent variables. The multilevel model for change has several attractive features: first of all, it allows us to differentiate between the level of a dependent variable at the start of the observational period, and the actual rate of change in that variable. Secondly, the multilevel model for change does not require the length of the observed period to be equal in each country, nor that the observations took place in the same year. This flexibility is required for our data, since the nature of the LIS is such that not all countries have participated for an equally long period of time and the surveys were not held in all countries simultaneously.

We specify a multilevel model for change for each of our four dependent variables: (I.) the contribution of women's earnings to the inequality between households, (II.) the correlation between spouses' earnings, (III.) earnings inequality among women, and (IV.) the share of women's earnings as a percentage of in total household earnings. The models are specified to

allow the trends in these variables to vary between countries, and to allow these differences in trends to be regressed on explanatory variables that are time-varying at the country-level.

The multilevel model for change differentiates between level-1 (here: trends within countries) and level-2 (here: the between-country differences in trends). The within-country part is specified as:

$$Y_{ij} = \pi_{0i} + \pi_{1i} Y E A R_{ij} + \pi_{2i} POLICY_{ij} + \epsilon_{ij}$$

$$\tag{1}$$

with  $Y_{ij}$  representing the value of one of the dependent variables for country i in year j,  $\pi_{oi}$  representing the onset of the trend in this variable for country i and  $\pi_{1i}$  representing the speed of the trend in country i expressed as the amount of change per YEAR.  $\pi_{2i}$  represents the effect of a policy variable in country i on the dependent variable  $Y_{ij}$ . Subscript  $Y_{ij}$  to the  $Y_{ij}$  variable indicates that this variable is allowed to vary within countries over time. The errors  $Y_{ij}$  are assumed to be distributed normally.

To relate both the onset of the trends and the speed of the trends to country-level variables, such as indicators of policy, the between-country part of the multilevel model for change is specified as:

$$\pi_{0i} = \gamma_{00} + \zeta_{0i} 
\pi_{1i} = \gamma_{10} + \zeta_{1i} 
\pi_{2i} = \gamma_{20}$$
(2)

The between-country part of the multilevel model for change that indicates the country-differences in the onset of the trends  $(\pi_{0i})$  is specified here as an overall intercept  $(\gamma_{00})$ , and the variation of the per-country differences  $(\zeta_{0i})$ . Similarly, the  $\pi_{1i}$  parameter of the within-country part is specified in the between-country part as an indicator of the overall trend  $(\gamma_{10})$  and the per-country variation from this overall trend (expressed as variance  $\zeta_{1i}$ ). Finally, the  $\gamma_{20}$  parameter indicates that the effect of policy in the within-country part of the model  $(\pi_{2i})$  is assumed to be equally strong for each country.

Next, the within-country and between-country parts of the multilevel model for change can be integrated into:

$$Y_{ij} = \gamma_{00} + \gamma_{10}YEAR_{ij} + \gamma_{20}POLICY_{ij} + \zeta_{0i} + \zeta_{1i}YEAR + \epsilon_{ij}$$
 (3)

Finally, the model can be extended to allow the trend to be subject to different levels of the  $POLICY_{ij}$  variable, by specifying:

$$Y_{ij} = \gamma_{00} + \gamma_{10}YEAR_{ij} + \gamma_{20}POLICY_{ij} + \gamma_{30}POLICY_{ij} \times YEAR_{ij} + \zeta_{0i} + \zeta_{1i}YEAR + \epsilon_{ii}$$
(4)

The multilevel model for change thus allows differentiation between trends within countries, and differences in these trends across countries. We centre our year-variable in such a way, that the value 0 represents the year 1995. As such, the reference category in the interaction models refers to 1995.

#### 4 Results

In this section, the four dependent variables are regressed on measurements of family policies. First we present the results regarding the attenuating contribution of women's earnings to between-household inequality. Then, the results regarding three aspects of women's employment are presented.

In the analyses presented in Table 3, the dependent variable is the degree to which women's earnings attenuate inequality between households (number I. in the above). In the first column, a baseline multilevel model for change is presented. The intercept represents the fact that in 1995, on average, women's earnings had an attenuating effect of -36.6% on the earnings inequality between households. This means that in the counter-factual case that women had no earnings at all, earnings inequality between households would have been 36.6% higher than it actually was in 1995. Over time, as indicated by the year parameter, this attenuating effect increased in strength from (-36.64 - 14 \* -1.49=) -15.78% in 1981 to (-36.64 + 10 \* -1.49=) -51.45% in 2005. As indicated by the random effects, there is substantial variation in the average attenuating effect across countries.

In the second column of Table 3, the family policies (and controls for labour market) are introduced. In 1995, women's earnings had a stronger attenuating effect on between-household inequality in countries with long periods of paid leave than in countries with no paid leave. The strength of this effect of leave, as indicated by the interaction term, declined in the period from 1981 to 2005. In societies with high expenditure on family allowances, the attenuating effect of women's earnings on between-household inequality was weaker than in societies with low expenditure on family allowances. In contrast to the effect of paid leave, the effect of expenditure did not change over time. These findings are in line with our reconciliation policy hypothesis (part a.) and financial support policy hypothesis (part a.).

The inclusion of two family policies (and controls for the labour market) accounted for part of the between-country variation in the degree to which

women's earnings attenuate earnings inequality between households. This is indicated by the reduction of the random effect for the intercept ( $\zeta_{0i}$ ) from 15.24 to 8.92, a 35% reduction. The variation in the rate of change of the attenuating effect of women's earnings ( $\zeta_{1i}$ ) was reduced from .91 to .28. This means that 69% of this variation was explained by the inclusion of paid leave and expenditure on family allowances (but not the by labour market controls as these were not interacted with year).

Table 3: Multilevel Model for Change Regressing the Attenuating Contribution of Women's Earnings to Between-Household Inequality on Family Policies

The explanatory model (Model II) was controlled for female/male wage ratio and unemployment.

Source: Data from the Luxembourg Income Study (LIS, 2013) and the Comparative Family Policy Database (Gauthier, 2010).

	I. Baseli	ine	II. Explar	natory
	В	S.E.	В	S.E.
Fixed Effects				
Intercept $(\gamma_{00})$	$-36.64^{*}$	<sup>k</sup> 3.72	-26.27	17.17
Year $(\gamma_{10})$	$-1.49^{3}$	< 0.27	-1.71	* 0.33
Paid Leave				8* 0.08
Family Allowance			5.04	* 2.39
Year * Paid Leave			0.02	2* 0.01
Year * Family Allowance			0.23	0.21
Random Effects (SD)				
Residual $(\epsilon_{ij}), N_{lvl1} = 99$	8.76		7.30	)
Intercept $(\zeta_{0i}), N_{lvl2} = 18$	15.24		8.92	<u>)</u>
Random Slope Year $(\zeta_{1i})$ , $N_{lvl2} =$	0.91		0.28	3
18				

 $<sup>\</sup>overline{^{*}P} < .05$ 

The attenuating effect of women's earnings on between-household inequality was thus found to be stronger in societies providing paid leave, and to be weaker in countries with high expenditure on family allowances. It was discussed above that the degree to which women's earnings attenuate between-household inequality depends on three aspects: a high correlation between spouses' earnings exacerbates between-household earnings inequality, low inequality among women attenuates between-household earnings inequality,

and when women's earnings contribute to a large share of total household earnings the potential for attenuating (or exacerbating) in increased. In the next set of analyses presented in Table 4, we test how paid leave and expenditure on family allowances affected each of these three aspects of women's earnings.

The first column of Table 4 reports the multilevel model for change, regressing the correlation between spouses' earnings on family policies. For each explanatory variable, the multilevel model for change differentiates between the effect of this variable on the onset of the change and on the rate of change. We did not find any statistically significant association between either type of family policy and the correlation between spouses' earnings in 1995. Over time, as indicated by the interaction terms between policy and year, the effects of paid leave and family allowances became slightly weaker, as the direction of the interaction term is opposite to that of the 'main' term (but note that they were statistically insignificant to begin with).

The second column in Table 4 presents the multilevel model for change with earnings inequality among women as the dependent variable. The results suggest that in 1995 in societies with extensive leave earnings inequalities among women were smaller than in countries without such leave policies. High expenditure on family allowances was associated with higher earnings inequalities among women. Over time, the effects of paid leave and expenditure on family allowances became weaker in explaining earnings inequalities among women.

In the third, and final, model presented in Table 4, the dependent variable is the share of women's earnings in total households earnings. The estimate for the leave scale (.06 and statistically significant) suggests that in 1995 in countries with extensive paid leave, women's share in household earnings was greater than in countries without extensive paid leave. The interaction between year and the effect of leave, however, indicates that the effect of leave declined over time. Over time differences in leave arrangements between countries became less important in explaining cross-national variation in the share of women's earnings in total household earnings. We interpret this as a ceiling effect, similar to that reported by Harkness (2013): countries in which women contributed a large share to total household earnings - as a result of the available paid leave - had relatively little room for higher female employment and earnings. This is exemplified by the Nordic countries, in which leave policies already were extensive the 1980s and women's earnings typically contributed between 40% and 50% of total household income. With respect to expenditure on family allowances, the results suggest that in 1995 in societies with high levels of expenditure on family allowances the share of women's earnings in total household earnings was lower than in countries without such expenditure on family allowances. The effect of the expenditure on allowances declined over time, as indicated by the interaction term between year and expenditure.

With these results we were not able to reject the reconciliation policy hypothesis (part b.) or the financial support policy hypothesis (part b.), except for the hypothesised effects of both types of family policies on the correlation between spouses' earnings.

#### Influential data

The analyses presented in this paper were based on observations from only 18 countries. We therefore evaluated the model that was central to our conclusion for the presence of influential data: the attenuating effect of women's earnings on between-household inequality (Model II in Table 3). The procedures for detecting influential data in multilevel regression models are detailed Nieuwenhuis et al. (2012b).

Two countries showed overly high levels of influence: Italy and Belgium. However, the deletion of these countries from our data did not result in a change in the conclusions, nor in the direction and significance of the regression parameters. We thus conclude that our findings are not biased by the presence of influential data.

## 5 Conclusion and Discussion

Women's earnings attenuate earnings inequality between households. This attenuating effect was stronger in societies with extensive reconciliation policies but weaker in societies with extensive financial support policies for families with children. Reconciliation policies stimulate women's employment, and as a result were found to be positively associated with women's earnings contributing a larger share of total household earnings, and with lower earnings inequality among women. The latter results from the fact that with higher female labour force participation, fewer women have zero earnings. Both these findings are in line with Stier et al. (2001), who found that family policies supporting the employment of mothers were associated with lower wage penalties for women who temporarily discontinued employment for childbirth.

Financial support policies were found to have outcomes opposite to those of reconciliation policies. In societies with extensive financial support policies women's earnings contributed a smaller share of total household earnings, and there was higher inequality among women.

Table 4: Multilevel Model for Change regressing (I. CORRELATION) correlation between spouses' earnings on Family Policies, (II. INEQUALITY) inequality among women, and (III. SHARE) women's share in household earnings on Family Policies.

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	I. Correlation B S.E.		$(\times 10) \\ \text{S.E.}$	II. Inequality $(\times 10)$ III. Share $(\times 100)$ B S.E.
Fixed Effects Intercept $(\gamma_{00})$ Year $(\gamma_{10})$	20.89 15.72 0.21 0.23	0.51	0.87	17.58* 2.94 0.24 0.15
Paid Leave Family Allowance	0.03 0.06 -0.56 1.85	-0.01* 0.30*	0.00	0.06* 0.03 -2.45* 0.73
Year * Paid Leave Year * Family Allowance	-0.01* 0.00 $0.27* 0.14$	*90.0	0.00	-0.01* 0.00 $0.26* 0.09$
Random Effects (SD) Residual $(\epsilon_{ij})$ , $N_{lvl1} = 99$	4.40	0.35		2.03
Intercept $(\zeta_{0i})$ , $N_{tvl2} = 18$ Random Slope Year $(\zeta_{1i})$ , $N_{tvl2} = 18$	10.18 0.27	0.05		3.05 0.31
* P < .05				

Results controlled for unemployment and female/male wage ratio.

The findings of this paper pertain to relative inequality. It should thus be pointed out that as long as a positive correlation between spouses' earnings exists, the absolute differences between the richest and poorest households are likely to increase in societies with an institutional context that facilitates women's employment. Also, our findings only apply to coupled households. Whereas this is common in the literature on inequality decomposition (Harkness, 2013; Lam, 1997), this also means that our findings do not apply to the increasing number of single-parent families (see: Casey & Maldonado, 2012). Finally, each of our two hypotheses were tested using only a single indicator. Future studies could repeat our analyses using different measures of reconciliation policies and financial support policies for families. We refrained from over-specifying our regression models: the number of available degrees of freedom was already low because the multilevel model for change (Singer & Willet, 2003) requires the specification of both the independent variable and its interaction and because we sought to control for two labour market characteristics.

Our finding that between 1981 and 2005 family policies became less important in explaining cross-national variation in different aspects of women's employment deserves further discussion. Firstly, this finding shows the relevance of using the multilevel model for change, analysing trends by distinguishing between the starting point and the rate of change. Without this distinction, this ceiling effect could not have been detected. Secondly, this finding corresponds to Harkness (2013), who reported that the potential for increasing the attenuating effect of women's earnings was stronger in countries with relatively low female labour force participation. That finding was based on cross-sectional research, and is now corroborated by our trend analyses that showed that in countries traditionally providing an institutional context facilitating the employment of women women's earnings had a strong attenuating effect but a low increase in that effect over time.

Various authors have pointed towards the unintended consequences of the outcomes of family policies being biased against low-income families and exacerbating between-household inequalities (Cantillon et al., 2001; Lancker & Ghysels, 2012). ?Ghysels & Van Lancker (2011) found low-income and low-educated families were less likely to take up leave. Others have shown, in contrast, that the increased participation of women in the labour market has compressed the earnings distribution among women and among households (Mandel, 2013). To this juxtaposition in the literature, we contribute the findings that despite selective uptake of the benefits of reconciliation policies, in the long run from 1981 to 2005 women's earnings in coupled households have increased and earnings inequality among women has decreased (also see: Cantillon, 2011). Thus, countries with family policy arrangements that facil-

itate women's employment and earnings, and consequently smaller earnings inequalities within households, also contribute to smaller inequalities between households.

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