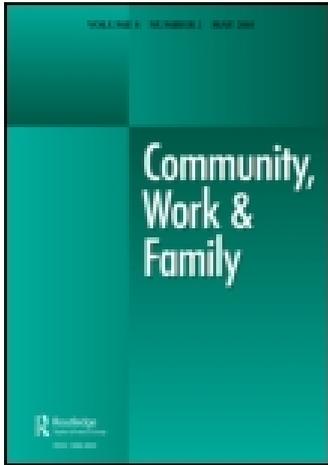


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Work-family policies and the effects of children on women's employment hours and wages

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Welfare state generosity around work-family policies appears to have somewhat contradictory effects, at least for some measures of gender equality. Work-family policies, in encouraging higher levels of women's labor market participation, may have also contributed to lower wage-levels for women relative to men, for instance. We consider the relationship between particular work-family policies and mothers' employment outcomes. Analyses use data on employed women aged 25–45 from the Luxembourg Income Study for 21 countries across Eastern and Western Europe, North America, Israel, and Australia. We estimate within each country differences in employment hours and wages for women based on their number of children. Then, we examine the association of estimated per child penalties in wage and employment hours with country-level data on leaves and childcare. Work-family policies are generally associated with positive employment outcomes for mothers, relative to childless women. Work-facilitating policies such as childcare for young children have decisively positive effects on mothers' employment hours and wages. Work-reducing policies, such as parental leave, however, can have positive effects if the leaves are moderate in length, but tradeoffs if the leaves are long.

Keywords: work and family; gender; employment; wages

La générosité de l'État-providence autour des politiques de conciliation travail-famille semble avoir des effets contradictoires, du moins pour certains critères concernant l'égalité des sexes. En encourageant davantage la participation des femmes dans le marché du travail, les politiques de travail-famille pourraient, par exemple, avoir contribué à la réduction du niveau des salaires des femmes relatifs à celui des hommes. Cette étude se penche sur le rapport entre des politiques particulières de travail-famille et leur impact sur le travail des mères. L'analyse se porte sur des femmes employées ayant entre 25 et 45 ans, et dont les données proviennent de l'Étude de Revenu du Luxembourg sur 21 pays en Europe de l'Est et de l'Ouest, en Amérique du Nord, Israël, et en Australie. Dans chaque pays, l'étude mesure les différences en heures d'emploi et en salaire pour des femmes, relatif au nombre d'enfants qu'elles ont. Dans un deuxième temps, nous examinons la relation entre les pénalités accrues en heures de travail et en salaire pour chaque enfant, et les données disponibles pour chaque pays sur les congés de travail et la garde des enfants. Les politiques travail-famille ont généralement des résultats positifs sur l'emploi des mères comparé aux femmes sans enfants. Les politiques qui facilitent le travail, telles que la garde d'enfants en bas âge ont des effets positifs décisifs sur les heures d'emploi et les salaires des mères. Les politiques de réduction de travail, telles que le congé parental, peuvent

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avoir des effets positifs, si leur durée est modérée, mais deviennent compromettantes si elles sont longues.

Mots-clés: conciliation travail-famille; l'égalité des sexes; salaire; heures de travail

The major expansion of the welfare state in the late twentieth and early twenty-first century has been around work-family policies, efforts meant to help reconcile the competing demands between employment and care for family members. These policies range from parental leave schemes, to provisioning and financial support of childcare, to efforts to regulate work-time (Gornick & Meyers, 2003). Work-family policies are, broadly, meant to boost fertility and ensure that women are able to remain attached to the labor market, even if they have children. This attachment is important because welfare states require workers to pay into the social security system; women (including mothers), therefore, have become a crucial group to incorporate into the welfare state's labor markets (Esping-Andersen, 1990; Korpi, 2000; Orloff, 2002).

We investigate whether cross-national differences in these work-family policies are associated with differences in the impact of children on women's employment hours and wages. We consider these associations in a broad range of countries across Eastern and Western Europe, North America, Israel, and Australia. We explore the distinct associations of leave policies and childcare provisioning with employment outcomes. We also consider whether work-family policies are associated with differences between women, based on their responsibilities for children. We focus on these questions, in part, to address a larger question regarding whether work-family policies are helping or hindering women's economic advancement.

Welfare state generosity around work-family policies appears to have somewhat contradictory effects, at least for some measures of gender equality. These policies may create something of a welfare state paradox – increasing women's overall labor force participation and economic independence, but simultaneously limiting women's – or some women's – job opportunities and wages (Mandel & Semyonov, 2005, 2006). While work-family policies have encouraged higher levels of women's labor market participation, they may have also contributed to higher levels of occupational gender segregation and to lower wage levels for women relative to men (Pettit & Hook, 2009).

We examine these apparent trade-offs to consider how they may differ based on specific types of policies. We also consider how policies target certain groups of women – such as mothers – and explore how these policies shape 'motherhood gaps' between childless women and mothers.¹ Overall, our findings suggest that work-family policies are associated with positive employment outcomes for mothers, relative to childless women. Work-facilitating policies such as childcare for young children have decisively positive effects on mothers' labor force participation and wages. Work-reducing policies, such as parental leave, however, can have positive effects – but only if the leaves are moderate in length. Countries without or with very short parental leaves see negative effects for mothers' employment outcomes – but so do countries with very long parental leaves. We argue that by looking at how policies relate to employment and wage outcomes among women structured by their responsibilities for children and by considering policies separately, we develop a

better understanding of the effects of work-family policies on women's employment and wages. In the next two sections, we briefly discuss our focus on the effects of children and how and why we examine each policy separately.

The effect of children on employment and wages cross-nationally

Despite cross-national variation in women's employment and wages, convergence between their rates with men's has increased over the past several decades, especially for childless women and men. While some childless women are women who have not yet had children, there remain substantial differences in employment and wages for childless women and mothers, controlling for age (Budig & England, 2001; Harkness & Waldfogel, 2003; Misra, Budig, & Moller 2007; Rubery, Smith, & Fagan, 1999). Some women will be permanently childless; indeed, approximately one-quarter of American women in their mid-40s are currently childless. The permanently childless are significantly different from mothers in terms of human capital and socio-economic background (Lundquist, Budig, & Curtis, 2009). Childless women, for the most part, have employment patterns that are much *more* similar to childless men's patterns. Patterns for women with one or more children, however, are distinctly different. Figure 1 summarizes differences in predicted employment hours for 30-year-old partnered women, who did not complete post-secondary education or occupational training leading to certification, and whose other household income is average for their country. These data allow us to compare how women with no children compare to women with one or two children.

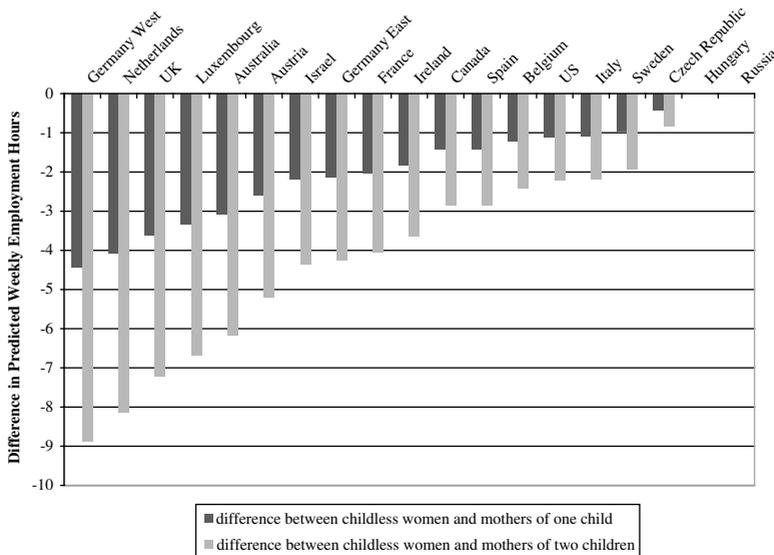


Figure 1. Difference in predicted weekly employment hours between a childless woman and a mother of one child and between a childless woman and a mother of two children for a 30-year-old partnered woman, not highly educated, living in a household with average other household income, and average other household income squared.

The black bars indicate the difference in expected weekly employment hours between childless women and a woman with one child; the grey bars indicate the difference in expected weekly employment hours between childless women and a woman with two children. In some countries, the effects of children on employment hours are quite large (the Netherlands, West Germany), while in others they are smaller (Sweden, Czech Republic), or non-existent (Hungary, Russia). Mothers are less likely to be engaged in the labor market in many countries and, when they participate, they are likely to be part-time workers.

In Figure 2, we show expected wage gaps between women with zero, one, and two children, assuming again a 30-year-old partnered woman working part time, without post-secondary education or occupational training leading to certification and average other household income. Again, the graph shows the difference in annual wages (in US 2000 dollars) between a woman with one child and a childless woman (with the characteristics listed above), and the difference in wages between a woman with two children and a childless woman. As Figure 2 suggests, there are quite large differences cross-nationally in the effects of children on wages. In Israel, Sweden, Slovak Republic, Hungary, France, Finland, and Australia there is no child penalty. On the other hand, women in West Germany and the Netherlands incur much larger penalties for each additional child.

These figures suggest that focusing on policy outcomes for all women generally may underestimate important variation among women – in particular, depending on whether they have children and how many children they have. While gendered inequalities exist, the difference between mothers and childless women is even greater than the difference between childless men and women (Budig, Misra, & Boeckmann, 2010; Misra, Budig, & Boeckmann, forthcoming). These figures do not allow us to capture the remarkable variation in childless women’s employment hours – which are

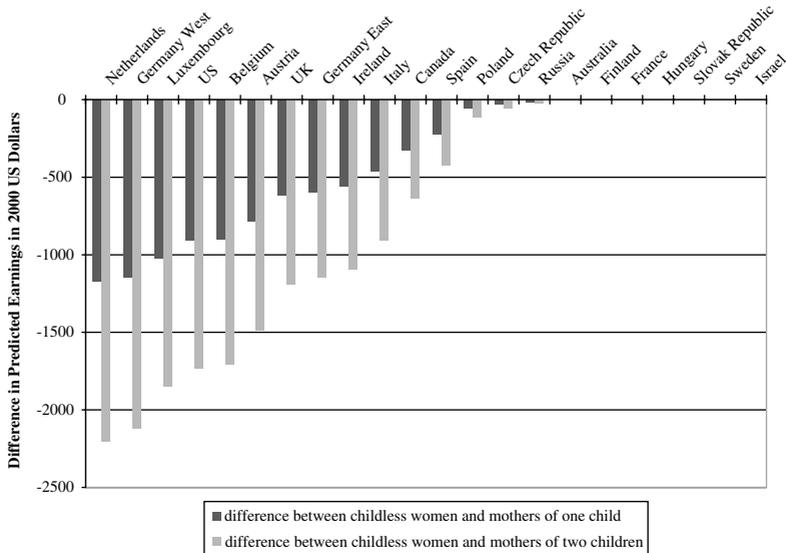


Figure 2. Difference in predicted annual wages between a childless woman and a mother of one child and between a childless woman and a mother of two children for a 30-year-old partnered woman, not highly educated, working part time, presented in 2000 US dollars.

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relatively low in certain countries, such as Spain and Italy, and on par with childless men's employment hours in other countries, such as the Czech Republic and Australia. However, our analyses focus on the effects of children on employment hours and wages. Work-family policies, for the most part, are meant to address conflicts between caregiving and employment. These conflicts are particularly acute for parents of young children. Therefore, focusing on the effects of children in order to understand the relationship between work-family policies and women's employment and wages is a sensible strategy. In the next section, we discuss specific work-family policies and our expectations.

Work-family policies

Many scholars have examined the impacts of work-family contexts by looking at differences across groupings of countries or what Esping-Andersen (1990) terms 'welfare states regimes' (Orloff, 2002). Another approach is to use work-family generosity indices that group together leave, childcare policies, and other country-level factors (Gornick & Meyers, 2003; Mandel & Semyonov, 2005). For example, Mandel and Semyonov (2005) include maternity leave, public childcare coverage, and public sector employment in their index of welfare policies. Although Mandel and Semyonov argue that the index 'represents a composite phenomenon with consequences that go beyond the unique effects of each of its components' (2005, p. 964), we contend that combining them into one index obscures important differences.

We argue that we can best understand the impact of policies if we disaggregate policies to explore their effects separately, rather than studying differences across welfare state regimes or analyzing a single index of work-family generosity. At the same time, it is important to understand how specific policies are always embedded within larger welfare state contexts. We argue that 'work-facilitating' policies, such as childcare, are more likely to have simple positive effects on employment outcomes for women – particularly those with responsibilities to children – while 'work-reducing' policies such as leaves may have more ambivalent effects (Pettit & Hook, 2009, p. 4). These work-reducing and work-facilitating policies display different gendered assumptions about women's roles, as well as the state's roles in addressing work-family conflict. Where work-reducing policies exist, but work-facilitating policies do not, we might expect to see particularly weak employment outcomes for mothers. While short-term maternity leaves may help parents remain attached to the labor force immediately after the birth of their children, long-term parental leaves may instead be used to ease women out of the labor market or perhaps reinforce 'mommy-tracks', such as part-time rather than full-time employment.

Following previous research, we explore policies that we think may most strongly influence mothers' (and fathers') abilities to combine work and care: maternity, parental care leave policies, and childcare for very young and older children (Gauthier & Bortnik, 2001; Gornick & Meyers, 2003; Pettit & Hook, 2009). While other policies such as tax policies or child benefits (Jaumotte, 2003) may affect parents' employment and wages, work-family reconciliation policies target the pressures families face in balancing care and employment.

Leave policies – maternity and parental leave – are meant to support caregiving, while allowing parents to stay connected to employment. We define maternity leave as birth-related leave available to mothers that are often accompanied by

wage-related benefits. Parental leave refers to longer leaves that enable parents to care for young children in the home. In our set of countries, parental leaves are most often either unpaid or accompanied by a flat-rate benefit. The absence of leave policies may also force women to withdraw from the workforce after a child's birth – as demand for affordable and quality childcare often exceeds supply. At the same time, moderate leaves may help mothers maintain labor force attachment. Yet, long parental leaves could decrease women's employment continuity and wages and reinforce traditional gender divisions of labor in the home, especially if only women take long parental leaves (Morgan & Zippel, 2003). Indeed, studies show curvilinear relationships between leave length and women's employment outcomes and poverty (Evertsson & Duvander, 2010; Pettit & Hook, 2009).

While childcare programs were adopted both to support parents' employment and to provide 'early education', these programs – particularly those for children under three – are explicitly recognized as helping families balancing care and employment (Gornick & Meyers, 2003). Indeed, childcare costs have strong links to women's employment; Han and Waldfogel (2002) argue that in the United States, reducing childcare costs could substantially raise employment of both married and single mothers. Since government funding and subsidies tend to reduce the cost of childcare to parents, we focus on publicly supported, rather than market-based, childcare. Cross-nationally, Pettit and Hook (2009) show that high levels of childcare positively affect women's labor market participation. These results may be particularly strong for early education for children under three, as childcare for older children is more broadly available in many societies.

Therefore, we focus our attention on how maternity and parental leave and childcare provisioning are related to mothers' outcomes regarding employment and wages cross-nationally. We expect to see higher employment hours, as well as higher wages, for women with one or more children in those countries with generous childcare arrangements. We also expect to see better outcomes for women with one or more children in countries with more generous maternity leave policies. However, we expect a curvilinear relationship for parental leave – with very short/no leaves or very long leaves associated with large earning and employment penalties for mothers, and moderate leaves associated with relatively higher wages and employment for women with children.

Overall, our contribution to this literature is to investigate: (1) differences in employment hours and wages for women based on their number of children in a broad range of countries across Eastern and Western Europe, North America, Israel, and Australia; (2) the distinct associations of maternity and parental leaves and publicly funded childcare for very young (zero to two years) and for older (three to five years) children with estimated wages and employment penalties.

Data and measures

We use data from multiple sources. Individual-level data come from the Luxembourg Income Study (LIS, 2010). The LIS is an excellent source of secondary cross-national survey data on households, employment, and wages. These data are derived from a range of national surveys shown in Table 1. With a few exceptions analyses use Wave 5 (representing the years 2000/2001) of the LIS data for 21 countries. We list them here with their ISO 3166 three-character code, which we will use to identify each

country in our analyses: Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Czech Republic (CZE), Finland (FIN), France (FRA), East Germany (DEU-E), West Germany (DEU-W), Hungary (HUN), Ireland (IRL), Israel (ISR), Italy (ITA), Luxembourg (LUX), Netherlands (NDL), Poland (POL), Russia (RUS), the Slovak Republic (SVK), Spain (ESP), Sweden (SWE), the United Kingdom (GBR), and the United States (USA). We examine East and West Germany separately due to continuing differences in employment patterns and the impact of their socio-political legacies. For all countries, the sample is restricted to employed adult women, age 25–45 (prime years for childrearing), who are not self-employed² and not in military service. Table 1 presents the sample sizes before and after we apply our sample restrictions.

Table 1 also presents differences in the percentage of childless women in each country. For example, only 8.5% of Slovakian women in our sample are childless, as compared to 31.3% of Dutch women. These differences reflect other findings on fertility rates across these countries, and also provide some context for understanding differences between childless women and women with one or more children. In the LIS data we can identify women as mothers only if they have children currently living at home. Our measure of motherhood captures the number of all children living with them at the time of the survey. Because there are some differences across these countries in early adulthood³ in terms of cohabitation and marriage, parenthood, and educational enrollment, we believe it is most sensible to focus on those who are at least age 25, though some of these women became mothers before age 25. By choosing an upper age limit of 45, we try to limit the number of women who may not be categorized as mothers because their children have already left home. Consequently, our estimates of the impact of motherhood on employment outcomes may be somewhat conservative – since we are not capturing the immediate effects of motherhood on young mothers (those under 25), and we are likely to code some mothers whose children have left home as childless. These conservative biases should make it more difficult for us to identify significant effects of children on women's wages and employment.

We focus on two dependent variables: the natural log of annual wages and the number of hours worked weekly by the respondent. Using logged wages minimizes the effect of outliers and enables us to make comparisons across different currencies since coefficients can be interpreted in a straightforward manner as a percentage change in wages given a one-unit increase in wages in an independent variable (by multiplying the coefficient by 100).⁴ For the other dependent variable we use a measure of the number of hours worked per week by the respondent; for most countries, this means drawing upon a measure of usual weekly hours. For Sweden, we calculate weekly hours by dividing the available measure of annual working hours (excluding vacation time) by 48 (52 weeks minus 4 weeks of statutory annual vacation). Unfortunately, LIS does not include hours-worked measures for Finland (2000), Poland (2004), and the Slovak Republic (1992), so we do not model employment hours for these countries.⁵

We are interested in whether children are associated with reduced weekly hours and whether they are associated with wages penalties (controlling for employment hours). Specifically, we ask whether the number of children negatively impacts women's wages and working hours and whether there are cross-national differences in the size of these effects. Yet, cross-national differences in the child penalties for both

Table 1. Original surveys, survey years, and sample sizes.

Country	Original data source	Survey year	Full LIS sample	Sub-sample of 25–45-year-old women	Percentage of childless women in samples
Australia	Survey of income and housing costs	2001	13,183	2267	27.2
Austria	European community Household panel	2000	6845	775	20.0
Belgium	Panel study of Belgian households	2000	6935	1017	20.7
Canada	Survey of labor and income dynamics	2000	72,850	9769	26.9
Czech Republic	Czech microcensus	1996	71,836	8965	10.8
Finland	Income distribution survey	2000	27,841	3144	23.4
France	Household budget survey	2000	25,803	3588	20.9
Germany East	German social economic panel study	2000	6776	948	18.3
Germany West	German social economic panel study	2000	22,075	3329	26.2
Hungary	Household monitor survey	1999	5517	592	12.5
Ireland	Living in Ireland survey/ECHP	2000	9131	916	14.9
Israel	Household expenditure survey	2001	19,555	2299	11.6
Italy	Survey on household income and wealth	2000	22,268	2307	17.5
Luxembourg	Socio-economic panel	2000	6240	979	29.3
Netherlands	Socio-economic panel	1999	12,445	2028	31.3
Poland	Polish household budget survey	2004	99038	10,980	12.5
Russia	Russia longitudinal monitoring survey	2000	9248	1209	12.2
Slovak Republic	Slovak microcensus 1992	1992	47,715	6783	8.5
Spain	European community household panel	2000	14,320	1613	28.7
Sweden	Income distribution survey	2000	33,139	4034	23.7
United Kingdom	Family resources survey	1999	59,010	8193	26.7
United States	Current population survey	2000	128,821	17,164	27.0

hours of employment and for wages could result from differential selection of women into employment across countries. To account for such selection processes, we employ a two-stage Heckman sample selection correction estimation procedure, which corrects for non-randomly selected samples. In the first stage, we include all women (whether or not they are employed) and predict employment; in the second stage, we predict wages or employment hours, adjusting for the different probabilities of employment among women in the sample and estimating the effects of covariates on hours and earnings for the employed. Heckman models allow us to control for such selection into employment. Our selection criteria include high educational attainment (post-secondary education or occupational training leading to certification), other household income (household wages minus the respondent's wages), transfer income (household income from the state), and presence of a preschooler.

Other covariates include educational attainment, age, relationship status, other household income, and – for the wages models – a measure of working time. Educational attainment is measured with a dummy variable indicating post-secondary education or occupational training leading to certification. We use respondent's age as a rough proxy for labor market experience. Family characteristics include marital status (married/cohabiting = 1, otherwise = 0). We ran models with married and with married and cohabiting respondents grouped together; there are no notable differences, so we combine married and cohabiting couples as partnered respondents in these analyses. In the models of employment hours, we include a measure of other household income, as well as a squared term, because we believe that women may make choices regarding employment depending on the other income available in their households and this may not be a linear process. Finally, for the wages models, we also include a measure of full-time employment, coded as respondents working more than 30 hours a week.

We use our newly created Work-Family Policy Indicators,⁶ modeled after databases developed by Gornick and Meyers (2003) and Gauthier and Bortnik (2001). Our database includes multiple time points for 22 countries (including Switzerland, which is not included in this analysis). We match our policy measures to the LIS survey year for each country, lagging the measurement of leave policies to two years prior to the survey year. For leaves, our measures distinguish between highly paid maternity leaves available to mothers and, generally, the longer parental/childcare care leaves that begin after maternity leave is exhausted, which is available to fathers and mothers and that do not always include high wage replacement (only five of our 21 countries provide some form of wage related benefit for all or portions of the leave period ranging from 30% in Italy to 80% in Sweden). We include only statutory, job protected leave provisions that can be taken full-time. Childcare coverage is measured as the percentage of children younger than three years and the percentage of children aged three to five in publicly supported formal childcare.

Findings

We focus on whether the number of children impact employment hours and wages of women, and how these impacts differ cross-nationally. By focusing on number of children, we are not simply differentiating between mothers and childless women – but women with responsibilities to different numbers of children (including those with zero children). We use a two-stage Heckman sample selection corrective

estimation procedure, in order to take into account differential selection of women into employment across countries. Our independent variables in the employment hours model include number of children, partnered status, age, high educational attainment, other household income, and other household income squared. For the wages models, our independent variables include number of children, partnered status, age, high educational attainment, and a dummy variable indicating whether the respondent is employed 30 or more hours a week. Table 2 summarizes these regression findings.

The columns on the left show the effect of the number of children on employment hours, after we have applied Heckman selection criteria, and controlling for the effect of age, education, partnered status, other household income, other household income squared, and high educational attainment. The controls act as expected in these models. Clearly, the effect of number of children varies substantially across these cases. For example, there is no statistically significant effect of number of children on employment in Russia or Hungary, yet significant coefficients range all the way up to -4.4 in West Germany, which suggests that each child reduces West German women's employment hours by 4.4 hours.

Table 2. Effect of number of children on women's weekly employment hours and the natural log of annual wages.

	Employment hours		Wages	
	B	<i>p</i>	B	<i>p</i>
Australia	-3.081	0.000	-0.004	0.767
Austria	-2.603	0.000	-0.114	0.000
Belgium	-1.207	0.001	-0.112	0.000
Canada	-1.431	0.000	-0.049	0.000
Czech Republic	-0.421	0.000	-0.013	0.058
Finland	*		-0.021	0.154
France	-2.031	0.000	-0.015	0.330
Germany East	-2.127	0.000	-0.088	0.008
Germany West	-4.441	0.000	-0.165	0.000
Hungary	-0.349	0.636	-0.014	0.745
Ireland	-1.818	0.000	-0.046	0.085
Israel	-2.180	0.000	0.007	0.619
Italy	-1.093	0.004	-0.052	0.002
Luxembourg	-3.337	0.000	-0.206	0.000
Netherlands	-4.070	0.000	-0.126	0.000
Poland	*		-0.044	0.000
Russian Federation	-0.076	0.903	-0.118	0.009
Slovak Republic	*		-0.010	0.164
Spain	-1.427	0.002	-0.079	0.009
Sweden	-0.960	0.002	0.008	0.799
United Kingdom	-3.612	0.000	-0.071	0.000
United States	-1.111	0.000	-0.101	0.000

Note: The bolded coefficients are all statistically significant at the 0.10 level. Significance levels are presented beside the coefficients.

*Measure of weekly employment hours not available.

The columns on the right focus on the effect of the number of children on wages, after we have applied Heckman selection criteria and controlling for the effect of age, education, partnered status, full-time employment, and high educational attainment. Again, effects vary from country to country – with no significant motherhood wage penalty appearing in Australia, Canada, Finland, East Germany, Hungary, Ireland, or Sweden. Yet in Luxembourg, the effect of each child on a woman's wages is $-.206$, indicating that for each additional child, women earn 20% less. Indeed, in most countries, women's wages are reduced by at least 5% per child, even controlling for full-time employment.

As we expected, these models indicate that in most countries there are differences in employment hours and wages among women based on the number of children that they have and controlling for individual-level differences and selection into employment. Clearly, children do affect most women's labor market involvement and wages. Yet, we are most interested in making sense of the cross-national variation in the effect of number of children on employment hours and wages. Why are women with (more) children working similar hours in some countries and relatively fewer in other countries, relative to women with fewer (or no) children? Why do women with (more) children have similar wages in some countries and much lower wages in other countries, relative to women with fewer (or no) children?

We explore how these outcomes are related to specific policies by focusing on five different policy indicators. We present a series of figures that use scatterplots to descriptively display how the significant effects of children on employment hours and on wages are distributed across the values of our policy measures – including maternity leave length, parental leave, public childcare for infants and toddlers, and public childcare for children aged three to six. In these figures, the scale of the partial coefficients for the number of children in predicting employment is on the right side of the graph, while the scale of the partial coefficients for number of children in predicting wages is on the left side of the graph. Each country is marked using its ISO 3166 three-character code. Country names printed in black refer to wages, while those printed in grey refer to employment hours. We also present a solid line showing the correlation among all countries' wage penalties with the policy measure, plus a dashed line showing the correlation between the policy measure and employment hours penalties.

Figure 3 describes how the child penalties for employment hours and wages are distributed across the country values for maternity leave length. We measure maternity leaves as short-term birth-related leave most often accompanied by wage-related benefits and include only statutory, job-protected leave provisions that can be taken full-time. We thought that maternity leave could protect women from child penalties – that job-protected and paid maternity leaves would allow women to remain attached to the labor force, even after the birth of a child. As Figure 3 suggests, maternity leave length appears associated with lower child penalties for both employment hours and wages; the per-child penalties are smaller in countries with more generous maternity leave policies. While this pattern is present for both employment hours and wages, the relationship appears stronger for hours, suggesting that these policies may be more effective at maintaining mothers' attachment to the labor force in terms of hours of employment. This is interesting, given the absence of variation in these measures across countries – most countries

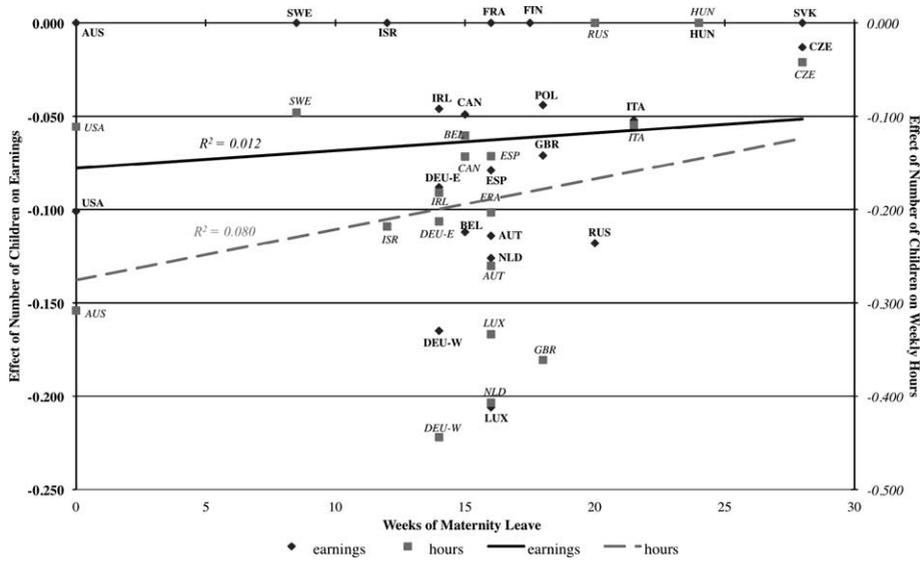


Figure 3. Distribution of the effects of number of children on women’s wages and weekly employment hours across country-level observed values of the number of weeks of paid maternity leave.

have paid maternity leave for around 12–16 weeks (the United States and Australia are the exceptions here).⁷

In Figure 4, we look at how the effects of children on wages and hours of employment are distributed across countries with varying lengths of parental leave.

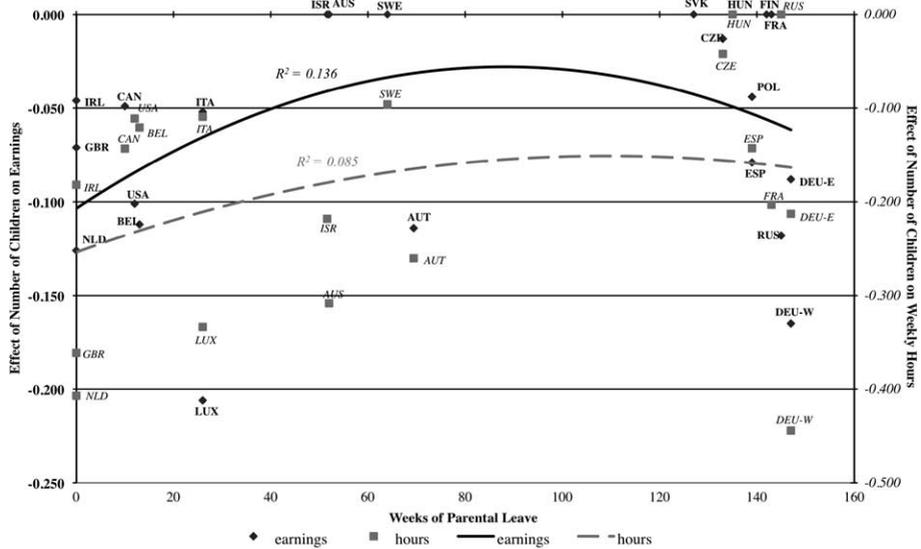


Figure 4. Distribution of the effects of number of children on women’s wages and weekly employment hours across country-level observed values of the number of weeks of job protected parental/childcare leave.

We measure parental leaves as job-protected parental care leaves that begin after maternity leave is exhausted; many of these leaves include some form of benefit, but only in a few countries these benefits are wage-related benefits. We suggested that parental leave (in weeks) would have a curvilinear relationship with penalties for children: moderate parental leaves would be associated with smaller penalties, by allowing women to maintain employment after giving birth, while both no leave and very long parental leaves would be associated with larger penalties, because the absence of leave and long leaves might both reduce labor force attachment. Consistent with our arguments (and the larger literature), parental leave appears to have curvilinear associations with employment and wages – where parental leaves are of moderate length (between 40 and 90 weeks) such as in Australia, Israel, and Sweden we observe smaller child penalties for employment and wages. However, it should be noted that the leaves in Australia and Israel are unpaid and we do not explicitly examine the impact of benefit levels here. Where leaves do not exist, or are very short such as in the Netherlands, or are very long such as in West Germany, we observe greater child penalties for women's employment hours and wages. However, this pattern is imperfect. For instance, Austria has a parental leave of moderate length, but Austrian mothers work significantly fewer hours and earn significantly less with each additional child than comparable mothers in Sweden.

Finally, we thought that the availability of state-provided childcare might be associated with the effect of children on wages and hours of employment. We measure childcare in terms of the percentage of children aged zero to two and aged three to five in publicly funded care. State-provided childcare for children under two is explicitly meant to help families balance care and employment – and, therefore, we considered whether smaller motherhood wage and hours penalties might be observed in countries with higher rates of this care. Programs for children aged three to six are often seen as providing educational support for young children; in some countries, these programs include long lunch breaks or hours that make it difficult for both parents to work full-time. Therefore, we thought we would observe a weaker association between programs for children aged three to six and the size of the child penalties cross-nationally. We examine these patterns in Figures 5 and 6. It does appear that where childcare for infants and toddlers is more pervasive, we generally observe smaller child penalties on women's employment hours and wages. On the other hand, childcare for children aged three to six shows less correspondence with hours and earnings. This finding echoes Kreyenfeld and Hank's (2000) results regarding the impact of the availability of childcare in West Germany on women's employment participation. They find no effect and argue that this may be due to limited opening hours, especially for the kindergarten age group.

Overall, our findings suggest that work-family policies cannot be read as being linked in simple ways with women's employment outcomes. Certain policies – such as paid maternity leave and childcare for young children – appear to support mothers' labor force participation and wages. Other policies – notably parental leave – have more ambivalent associations with child penalties for hours and wages, with no or very short and very long leaves linked to greater negative effects of children on employment hours and wages. While many scholars combine leave measures with childcare, for example, to develop indexes of family policy generosity, these analyses suggest that such an approach might be less effective.

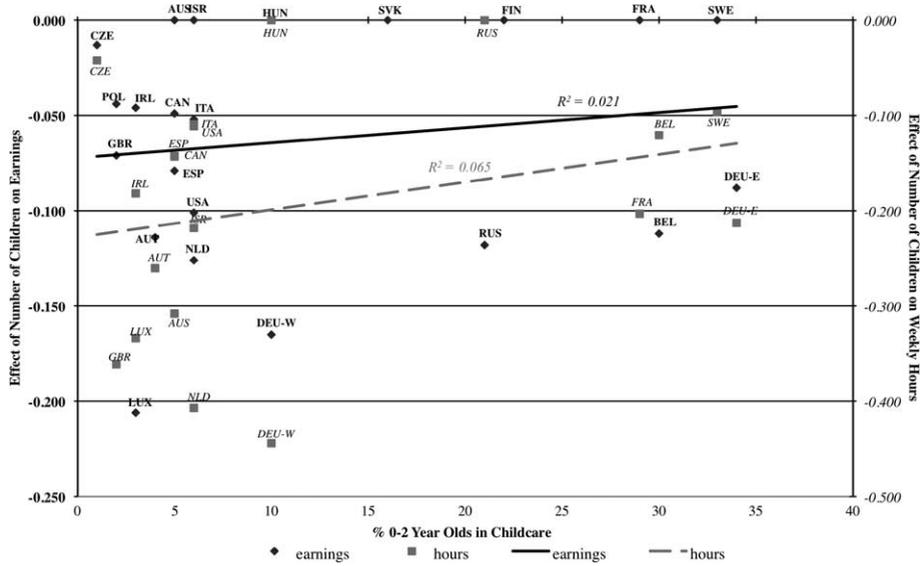


Figure 5. Distribution of the effects of number of children on women’s wages and weekly employment hours across country-level observed values of the percentage of children aged 0–2 in publicly supported formal childcare.

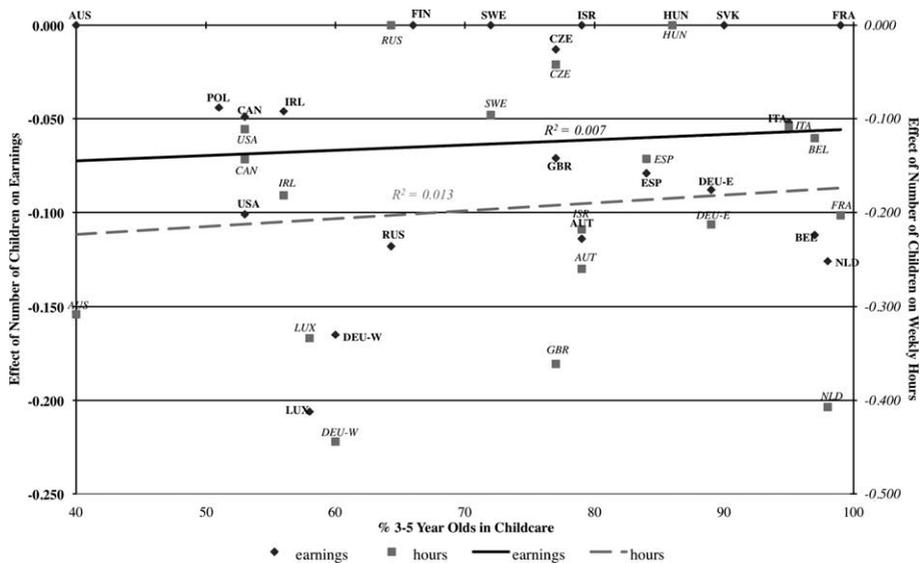


Figure 6. Distribution of the effects of number of children on women’s wages and weekly employment hours across country-level observed values of the percentage of children aged 3–5 in publicly supported formal childcare.

Discussion

The literature on welfare state policy and gender equality has focused – rightly so – for a number of years on the potential of family policies to lead to unexpected consequences regarding gender equality. Responding to an earlier wave of scholarship that appeared to view family policies as an unmitigated ‘good’ for women’s employment and wages, recent scholarship has pointed out the flaws in these assumptions, pointing to the potential for trade-offs in policy effects (Mandel & Semyonov, 2005, 2006; Pettit & Hook, 2009).

Understanding the welfare state paradox, however, requires understanding that different policies may have different effects by groups of women. Recent attempts to point out how women in different class positions may stand to gain (or lose) from certain policies have been an important next step (Jenson & Sineau, 2001; Mandel & Shalev, 2009a, 2009b). In this paper, we focus on how women with different relationships to parenthood may have different experiences in welfare states. In a few countries, the number of children has little effect on women’s employment hours and wages. Yet, in many countries there are dramatic differences between women without children and women with varying numbers of children – differences well worth considering and analyzing.

In addition to focusing on how women with different responsibilities for children compare to one another, we have examined how these differences (or child penalties) might be associated with different policies. We descriptively explored these relationships for a number of major policies – maternity leave, parental leave, and childcare coverage. What we observe suggests that some of the trade-offs that others have identified may truly be due to generous parental leave policies combined with a lack of childcare for children under the age of three. Parental leaves and childcare may be based on different underlying gendered assumptions. Childcare coverage for children under three may reflect assumptions of the importance of women maintaining their attachment to the labor force, even when children are young; long parental leaves, on the other hand, may reflect assumptions of the importance of mothers’ providing primary care for infants and toddlers. While parental leave policies are, in some senses, meant to help mothers maintain relationships with the workforce, very long parental leave policies might actually reinforce that mothers should expect long periods outside of the labor market. This may backfire if the goal is gender equality in the workforce – as employers will be less likely to want to support and hire workers who are likely to leave for long periods and may be more likely to ‘mommy-track’ women with children.

Parental leave and childcare for young children may be viewed as two sides of the same coin – where publicly provided, high-quality childcare for infants and toddlers exists, parents may be able to return to the labor force more quickly and need not rely on long parental leaves. Where long parental leaves exist, parents may be less likely to return to the labor market quickly and may be less likely to be able to find childcare. At the same time, these policies may create feedback loops – where long parental leave policies exist, the development of childcare programs may be weaker; where infant and toddler childcare coverage is strong, parental leave policies may be shorter. However, Sweden combines well-paid parental leave of moderate length with well-developed public child care provision outside the family after the end of parental leave. Similarly, in France long parental leave coexists with relatively high child-care

coverage, although there have been significant shifts in French family policies toward less public provision of childcare (Jenson & Sineau, 2001). (On the interplay between different policies relating to childcare see De Henau, Danièle, & O'Dorchai, 2006.)

At the same time, we see great variation of motherhood penalty size across values of family policies, suggesting variation in outcomes among countries with similar levels of parental leave or childcare coverage (such as West Germany and the Czech Republic). Simultaneously, employment patterns can help drive policy change – rather than policy change driving employment patterns (Huber & Stephens, 2000). A variety of other structural (unemployment, economic growth, income inequality, labor market regulations) and cultural (values regarding care, employment, and gender) factors might also help shape cross-national variation. In the Czech Republic, the small effect of motherhood on employment hours reflects a general lack of part-time employment, while the West German labor market provides more opportunities for mothers to work part-time (Kocourková, 2002).

We expect that family policies both reflect and reinforce larger cultural notions of what mothers should be doing when their children are young. In her analyses of Belgium, Denmark, the Netherlands, and the UK, Monique Kremer (2007) argues that 'ideals of care' about mothers' roles in society have played a crucial role in determining men's and women's employment and care patterns. Neither women's 'preferences' nor policy can fully explain the variations that exist in these patterns. Yet, interestingly, a few countries with high levels of support for mothers' employment when children are young (e.g., Sweden) also have substantial childcare provisioning for children under the age of three.⁸ Policies and culture may at times be in synch, making it difficult to determine 'which comes first'. However, clearly, by attending to cultural ideals, we can better understand why women's employment and care patterns differ across welfare states.

Pfau-Effinger (2004) argues that three dimensions affect women's employment: the gender arrangement (how men and women divide labor within the household), the gender order (welfare and labor market policies, and their gendered effects), and the gender culture (values regarding work, care, and gender). Examining West Germany, the Netherlands, and Finland over time, Pfau-Effinger (2004) shows that cultural traditions interact with social institutions (including labor market policies, welfare policies, and families) to shape changes in women's employment. Policies (the gender order) cannot dictate women's employment; instead, they interact with the gender culture and the gender arrangement. Yet, for Pfau-Effinger, all three of these dimensions are also dynamic and can help prevent or promote social change regarding women's employment (Pfau-Effinger, 2004).

We have tried to show the importance of considering policy outcomes, recognizing the potentially countervailing consequences of different kinds of family policies. It is crucial to recognize that inequalities among women, related to their care of children, are important, particularly when a significant proportion of women are forgoing motherhood. Even as childless women's employment and wages are converging with men's, there remain persistent gendered inequalities that are focused around parenthood and responsibilities for care. At heart, we believe that gender equality requires both men's and women's engagement in both care and employment. Yet, our analyses also suggest the importance of designing effective leave policies that promote parental attachment to the labor force and public provisioning for high-quality, employment-enabling childcare.

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Notes

1. Mandel and Shalev (2009a, 2009b) have unpacked one piece of this question – how family policies may affect women of different class positions differently. Mandel and Shalev (2009b, p. 1901) note ‘the consequences of any given role of the welfare state vary quite dramatically for women in different class positions’ – arguing that while these policies may help lower-class women, they may limit professional women’s advancement.
2. We do not include the self-employed because some crucial information such as working hours are not consistently available across all of the countries in our sample, making analyses of them unreliable.
3. This includes differences in educational enrollment rates (which we are unable to measure consistently with the available data across all countries).
4. The exact formula for transforming coefficients into percentage change in a logged dependent variable given a one-unit change in independent variables is $100(e^b - 1)$ (Allison, 1999). However, if coefficients are relatively small, the differences between the transformation using simple multiplication times 100 and using the formula involving exponentiation are very small.
5. It is, however, possible to construct categorical measures of full-time and part-time employment status using information on the number of annual weeks worked full-time or part-time for Finland. In the Polish (2004) and Slovak (1992) datasets, categorical variables on full-time and part-time status are available. Therefore, these are included in the wage models.
6. This dataset collection and development was funded by the National Science Foundation Grants #0600926 and #0751505.
7. When we take the United States and Australia out of the picture, the relationship between maternity leave and wages increases from an R-square of 0.012–0.059 and the relationship between maternity leave and employment hours increases from 0.080 to 0.168.
8. These data refer to the ‘Family and Changing Gender Roles’ modules (1994 and 2002) of the International Social Survey Program (ISSP), available through the Leibniz Institute for the Social Sciences: <http://www.gesis.org/en/services/data/survey-data/issp/modules-study-overview/family-changing-gender-roles/2002/>.

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