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Fatherhood, intra-household employment dynamics, and men's earnings in a cross-national perspective

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# LIS Working Paper Series

No. 592

## Fatherhood, Intra-Household Employment Dynamics, and Men's Earnings in a Cross-National Perspective

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### FATHERHOOD, INTRA-HOUSEHOLD EMPLOYMENT DYNAMICS, AND MEN'S EARNINGS IN A CROSS-NATIONAL PERSPECTIVE\*

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### Fatherhood, Intra-household Employment Dynamics, and Men's Earnings in a Cross-National Perspective

#### Abstract

Studies find fatherhood earnings premiums in several European countries and the United States. Yet little research investigates how intra-household dynamics shape the size of the fatherhood premium cross-nationally. Using data from the Luxembourg Income Study we examine how the division of labor in two-parent households is associated with the fatherhood premium in fourteen countries. We find cross-national variation in the presence and size of the fatherhood premium. Our findings also show that the fatherhood premium frequently depends on the household division of labor: Men with caregiver partners are mostly likely to receive the fatherhood premium. We consider how cultural and institutional contexts may shape the cross-national variation in fatherhood premiums.

While contemporary fathers do more childcare and housework than in past decades (Bianchi, Milkie, Sayer, and Robinson, 2000; Gauthier, Smeeding, and Furstenberg, 2004; Hook 2006), increased involvement in childcare and housework has not limited men's labor force participation or employment outcomes in the same way it impacts women's employment experiences (Nock, 1998). Indeed, fatherhood often intensifies men's labor force attachment, and recent studies find earnings bonuses for children. Fatherhood premiums are found in Australia and the United Kingdom (Whitehouse, 2002), Germany (Rosenfeld and Trappe, 2000), Denmark (Simonsen and Skipper, 2008), Norway (Petersen, Penner and Høgsnes, 2007), Britain, Italy, Netherlands, France, Greece, and Portugal (Smith Koslowski, 2011), and the United States (Glauber, 2008; Hodges and Budig, 2010; Killewald, 2013; Lundberg and Rose, 2000; Millimet, 2000). American fatherhood premiums are shaped by marital status, race, and education

(Glauber, 2008; Hodges and Budig, 2010; Killewald, 2013) and depend on female partners' labor market attachment (Hodges and Budig, 2010; Lundberg and Rose, 2000). And Cooke (2013) finds that only high earners gather premiums among American and British men. Despite the growth of nascent research on the fatherhood premium in western countries, few studies have systematically compared the size of the fatherhood premium cross-nationally and none have demonstrated how competing explanations for the premium—selection into fatherhood, increased work effort, the gender division of labor in the home, and country differences in sociopolitical support for the male breadwinner-female caregiver family model—can account for differences in these premiums cross-nationally.

To systematically address the processes giving rise to fatherhood premiums across countries, we use data from the Luxembourg Income Study (LIS) for fourteen countries in Western Europe (Belgium, France, East and West Germany<sup>1</sup>, Italy, the Netherlands, Spain, Britain), Northern Europe (Finland, Sweden), Eastern Europe (Czech Republic, Slovak Republic), and North America (Canada, United States). We examine selection processes with Heckman selection and human capital models. We evaluate work effort with work hours of fathers and mothers. To investigate how household specialization is linked to the fatherhood wage premium we distinguish between dual-earner couples and households with a primary male breadwinner (i.e., where the female partner works part-time or is not employed).<sup>2</sup> Our sample includes countries with different socio-political context, including gendered cultural attitudes towards maternal employment and men's breadwinning. We examine which individual-level and country-level factors help to account for variation in the fatherhood premiums across these countries.

We begin by reviewing previous studies and theoretical explanations for the fatherhood earnings premium, considering how intra-household dynamics, and processes in the workplace may affect the impact of fatherhood on earnings.

#### The Earnings Premium for Fatherhood

In cross-sectional studies, being a father is linked to a wage bonus ranging from 10 percent in the United Kingdom to 8 percent in Australia, 6 percent in Denmark and West Germany, and none in East Germany (Simonsen and Skipper, 2008; Trappe and Rosenfeld, 2000; Whitehouse, 2002). In Norway only fathers of two or more children received a wage bonus of just two percent (Petersen et al., 2007). One study using panel data found an hourly fatherhood premium in 8 of 15 European countries, namely Denmark, Germany, Greece, the UK, Italy, the Netherlands, France, and Portugal, but no premium in Finland, Ireland, Austria, Spain, and Belgium<sup>3</sup> (Smith Koslowski, 2011). In the United States, first-birth fatherhood bonuses among married men range from 7 to 9 percent net of work hours, human capital, and differential selection into fatherhood (Lundberg and Rose, 2000). Similarly, Glauber (2008), Hodges and Budig (2010), and Killewald (2013) using fixed effects models and data from the National Longitudinal Survey of Youth, find fatherhood wage bonuses for each additional child and for first-time fatherhood.

Differences in the size of the fatherhood premium across countries may be real, or due to the differences how fatherhood is measured and the statistical models utilized. Our analysis extends past work by using a consistent measure of fatherhood across countries to enable comparisons of the fatherhood premiums. First, we systematically model how established mechanisms producing the fatherhood bonus matter across countries: selection into fatherhood, human capital differences, and work hours. Second, we examine whether fatherhood bonuses

depend upon household specialization. In order to avoid confounding the impact of fatherhood on earnings with the well-documented marriage premium (Antonovics and Town, 2004; Chun and Lee, 2001; Cohen, 2002; Ginther and Zavodny, 2000; Gupta et al., 2007; Korenman and Neumark, 1991; Nakosteen and Zimmer, 1997; Seng Loh, 1996), we explore the relationship between fatherhood and earnings net of legally married status<sup>4</sup>. Finally, we consider how the premiums are tied to the larger socio-economic country context. We begin by discussing the theoretical mechanisms producing the fatherhood bonus.

#### **Explanations for Fatherhood Earnings Premiums**

There are two major theoretical explanations for the fatherhood premium: a "treatment" effect of fatherhood (e.g. men may increase their work effort after they become fathers, or employers may treat them more favorably) and a selection effect (men with higher earnings potential are more likely to become fathers). Studies of male fertility suggest that certain personality characteristics such as sociability may predict a) the likelihood of being partnered, and b) the likelihood of becoming a father (Jokela, Kivimäki and Elovainio, 2009; von der Lippe, 2010). If these characteristics are also positively related to earnings, fathers will earn more on average than childless men, and the relationship between fatherhood and earnings would be spurious. However, the weight of evidence from longitudinal studies of the fatherhood premium indicates that a treatment effect, rather than a selection effect of fatherhood on earnings is likely, or if there is selection, the direction is not uniform across countries as studies find alternating evidence for negative and positive (Lundberg and Rose, 2000; Smith Koslowski, 2011) selection. Studies that control for time-invariant unobserved selection through fixed-effect regression methods find positive effects of first-time fatherhood (Hodges and Budig, 2010) and number of

children (Glauber, 2008) on American men's earnings. Likewise, Smith Koslowski (2011) finds earnings advantages of fathers compared to non-fathers in eight out of fourteen European countries using fixed effects regression. To investigate selection effects, we test the first hypothesis:

H1: To the extent that positive selection into co-residential fatherhood can explain the fatherhood premium, the positive effect of fatherhood on earnings should be reduced in models that sequentially include (a) Heckman selection corrections, (b) human capital measures, and (c) marital status.

The finding of fatherhood premiums in models that control for selection suggests a "treatment" effect of fatherhood. Fathers may earn more due to the division of paid and unpaid work within households with children, increased work hours or work effort per unit of time, and favorable treatment by employers. According to the *household specialization argument*, small initial differences in women and men's capacities to care for newborn children (such as women's ability to breastfeed), together with existing gender earnings gaps (favoring men) render a male breadwinner – female caregiver division of paid and unpaid labor most efficient to maximize household utility (Becker, 1981). Household specialization implies that fathers will intensify their efforts in the labor market because a) children increase household economic needs, while women's income decreases as they allocate more time to care work, resulting in greater need for male earnings, and b) because men are able to focus on paid labor if mothers specialize in domestic work and alleviate men of hands-on care responsibilities (Becker, 1981).

Studies examining the effects of parenthood on men and women's labor supply consistently find that the transition to motherhood is associated with lower women's employment hours, while fatherhood tends to be positively related to men's employment hours (Kaufman and

Uhlenberg, 2000; Misra, Budig, and Boeckmann, 2011; Sanchez and Thompson, 1997).<sup>5</sup>
However, there is cross-national variation in these patterns. Contrary to Becker's (1981) argument, Sanchez and Thompson (1997) find no evidence that fathers increase their work hours when their female partner reduces hours after childbirth in the United States. Similarly, Verbakel (2010) finds that children, partner's employment participation and working hours had no significant effect on Dutch men's work hours (net of individual, household, and job characteristics). And among 14 European Union countries, Smith Koslowski (2011) found no effect of fatherhood on employment hours in the majority of countries. While the evidence of past studies is, again, mixed, we test the argument that fathers earn more due to increased work effort:

H2: The fatherhood premium should be reduced in models that include measures of a) men's paid work hours, and b) the extent to which the female partner specializes in unpaid work.

Even after controlling for the selection of fathers into employment, human capital, and household specialization, fatherhood premiums may persist due to *unmeasured increases in effort per unit of time* (consistent with Becker's argument), or to *differential treatment of fathers by employers*. Beyond increased work hours, men who are relieved of domestic work may have more energy to expend on the job. Thus, fatherhood premiums should be larger for male breadwinners with non-employed partners, and, to a smaller degree, for men with part-time employed partners. Men in dual full-time earner relationships are more likely to have to negotiate or simply perform housework and childcare to a higher degree than male breadwinners with caregiver partners. Indeed Bianchi et al. (2000) find that American husbands' housework increases with wife's employment hours. Similarly, Gershuny, Godwin and Jones (1994) show

that British men increase housework only if their spouses worked full time. Based on this, we predict that:

H3: Net of controls, a fatherhood premium should persist in households with female caregivers, and this premium should be larger than that found in households without female caregivers.

Beyond work effort, preferential treatment of fathers by employers may produce a fatherhood premium. Employers may perceive fatherhood as a proxy for work effort or job commitment. Scholars have argued that breadwinning is an integral part of hegemonic masculinity, and of understandings of a good father and husband (Connell, 1995; Townsend, 2002). Fatherhood may be used by employers as a proxy for valued, unobservable individual characteristics such as loyalty or dependability, because superiors and colleagues may see fathers as being more deserving of promotions (Coltrane, 2004), more likely to hold long-term loyalty to the firm (Kaufman and Uhlenberg, 2000), and more committed to their work than childless men or women (Correll, Benard, and Paik, 2007). In the context of higher employer expectations for the "family man," fathers may be given more opportunities to demonstrate their abilities, and fathers might be less scrutinized compared with less favored groups (such as mothers) for poor performance if they have family responsibilities that may interfere with their employment (Correll et al., 2007; Fuegen, Biernat, Haines, and Deaux, 2004).

In summary: While we are not able to empirically capture work effort per unit of time or employer behavior with our data, we are examining whether a fatherhood premium exists cross-nationally and to what extent human capital difference, labor supply and partner's employment participation shape earnings difference between men with and without children in the same household.

#### **Exploring Cross-National Differences in Fatherhood Premiums**

Research shows that the size of the motherhood earnings penalty and gender economic inequality in general can be linked to differences in institutional and cultural factors across countries (Budig, Misra, and Boeckmann, 2012; Gornick and Meyers, 2003; Korpi, Ferrarini, and Englund, 2013; Mandel and Semyonov, 2005; Hook, 2006; Pettit and Hook, 2005). What might contribute to the cross-national patterns of fatherhood bonuses, and heightened bonuses in male-breadwinner/ female-caregiver households?

It is possible that cross-national variation in the size of the fatherhood gaps is related to the *overall income inequality* connected to wage setting institutions within countries. Income inequalities have been linked to the size of the gender pay gap (Blau and Kahn; Mandel & Semyonov 2005), and may be similarly related to differences in economic rewards for fatherhood. This suggests:

H4: The net fatherhood premium should be larger in countries with higher levels of earnings inequality (as indicated by the Gini Coefficient).

Country differences in cultural support for the male-breadwinner/female caregiver model might correlate with the fatherhood premium cross-nationally. Studies have demonstrated links between egalitarian gender ideologies on a societal level and individual-level outcomes, such as the gender division of household labor (Fuwa 2004), or women's employment participation (Fortin 2005). Similarly, contexts that strongly link fatherhood and breadwinning may help men, who enact normative co-residental fatherhood, to advance in the workplace. Indeed, differences in cultural attitudes may encourage or dissuade employers to perceive and reward fatherhood as a signal of a dedicated worker. Fathers may also be more successful in bargaining with employers

for promotions and higher wages than childless men when dominant cultural narratives lend legitimacy to their claims (Nelson and Bridges 1999). This suggests:

H5: The net fatherhood premiums should be larger in countries with greater support for a male breadwinner-female caregiver model.

Related to broader cultural contexts, the variation in fatherhood premiums may be contingent on the institutional welfare state context that provide different degrees of support for male-breadwinner versus dual-earner families (Crompton, 1999; Esping-Anderson, 1990; Korpi, 2000; Lewis, 2001). Public policies in "conservative" welfare states (e.g. Germany, Luxembourg) tend to support a male-breadwinner/female carer or part-time carer division of labor, for example with extended parental leaves targeting mothers, transfer benefits to families, or taxation policies that are unfavorable to dual-earner households (Crompton, 1999; Jaumotte, 2003). "Liberal" welfare states (e.g. United States, Britain) provide comparatively low levels of support for working parents. Family leave is not universally available and tends to be unpaid, and childcare services are largely marketized and expensive for parents (Gornick and Meyers, 2003). In these countries fathers may compensate (or be compensated by employers) for reduced maternal earnings, especially when children are very young. While we do not offer formal hypotheses of these relationships, we expect greater premiums in more conservative countries that support the male-breadwinner model, and in liberal welfare states that do not provide significant supports for maternal employment. Similarly, we expect to find smaller fatherhood premiums in the Nordic countries where policies promote gender equality and attempt to shift cultural understandings of fatherhood. Nordic countries provide extensive public provision of childcare facilitating the (full-time) employment of women, and incentives for fathers to take up

care work. The need for fathers' income, as well as a male-breadwinner supportive gendered division of household labor, may be reduced in these countries.

#### **Data and Methods**

We use harmonized micro-data from OECD countries from LIS on fourteen western industrialized countries listed in Table 1. Within-country samples are restricted to men aged 25 to 45 in heterosexual relationships (both cohabiting and married).<sup>6</sup> Sample sizes range between 699 in the East German data to 11,071 in the United States.

The dependent variable in all models is the natural logarithm of gross annual earnings in national currencies, i.e. earnings before taxes and social insurance contributions. In our discussion, we use the formula 100\*(e<sup>b</sup>-1) to transform regression coefficients, so the coefficients are interpretable as the percent change in annual earnings attributable to a one-unit change in the independent variable. This approach allows for comparisons of the relationship between fatherhood and men's earnings across countries with different national currencies and limits the effect of extreme values on the lower and upper end of the earnings distribution.

Fatherhood is our independent variable of interest and is a dichotomous variable, coded one if a man co-resides with biological, adopted, or step child(ren), and zero otherwise. Marital status is a dummy variable=1 if legally married (reference category: cohabitors). Human capital measures include education and potential work experience. We use a harmonized measure of educational attainment, a dummy variable that indicates a post-secondary degree or higher vocational training, based on the international standard classification of education from UNESCO (ISCED97). Respondent's age is used to capture potential labor market experience. Work hours are measured as a dummy variable indicating part-time hours (30 hours a week or less). While we use harmonized measures in the models we present, we run a series of

robustness analyses using the best measures available for educational attainment and labor supply in each country. Finally, we use the wife/partner's employment status as a measure for the household division of labor in models where we estimate the impact of the presence of a female caregiving partner: "female caregivers" are coded =1 if the wife/partner does not work for pay or works part time (and 0 if full-time). We call couples "female caregiver" and "(male) breadwinner" for the sake of brevity.

We nest regression models to examine how different explanations of the fatherhood premium matter across countries. First we estimate the gross effect of fatherhood on earnings (Model 1). All models use a Heckman selection correction (Heckman, 1979). The selection model controls for educational attainment, age, other household labor income (total household income minus the respondent's earnings), and a dummy variable indicating that the respondent indicated that he has some form of disability (instrumental variable) as our selection criteria.<sup>9</sup> The second stage of the Heckman model adjusts for each respondent's differential likelihood of employment in its estimation of how other predictor variables are associated with earnings (Heckman, 1979). Model 2 adds controls for differences in human capital (age and education) to further understand what portion of the fatherhood bonus is attributable to selection effects. Next we add controls for marital status (Model 3) to estimate fatherhood effects net of potential marriage premiums. In Model 4 we include labor supply (employed part-time) to test whether fathers earn more because they may work more than childless men. Model 5 examines whether the presence of a partner who specializes in unpaid work may explain (part of) the relationship between fatherhood and earnings. Model 6 tests for a differential impact of fatherhood on earnings for men with and without female caregiver partners by including an interaction between the fatherhood status and the presence of a female caregiver. This model allows us to fully consider the importance of household specialization for the fatherhood premium.<sup>10</sup>

We use data from the International Social Survey Program to construct country-level measures capturing attitudes towards maternal employment and women's role as care providers, and we take the Gini Coefficient as our measure of income inequality from the LIS Key Figures (2012). To examine the relationship between the cross-national variation in the fatherhood premium and these measures, we calculate Pearson correlation coefficients.

We begin by discussing differences between fathers and childless men in each country before presenting findings from multivariate analyses.

#### **Findings**

Descriptive results

Among partnered men, the proportion of co-residential fathers ranges from 68 percent in the Netherlands to over 90 percent in the Czech and Slovak Republics, but lies between 71 and around 81 percent in the majority of countries. Table 1 presents means and standard deviations for the individual-level variables. As expected, we find unadjusted fatherhood premiums in annual earnings, significant in all countries with the exception of East Germany, Italy, Luxembourg, and the UK.



Compared with childless partnered men, fathers are more likely to be married and to live with a female caregiver, but with lower rates in the Nordic and Eastern European countries. This household division of labor is common in Luxembourg, Western Germany and the Netherlands, where policies support maternal caregiving in the home, or offer limited support for the

employment of women with small children, such as publicly supported (full-time) childcare services (Misra et al., 2011).<sup>11</sup>

While fathers generally have more potential labor market experience (based on age) they are less likely to have a post-secondary degree (university/college degree, or doctorate degree) or specialized vocational education. This suggests that the fatherhood premium is unlikely to be fully explained by positive selection of men with higher earnings potential into fatherhood. Part-time is rare and fathers are even less likely to work part-time than childless men (except in Italy and the Czech Republic), indicating that work hours may not be the primary factor driving fatherhood premiums. Only in the Nordic countries, France, West Germany, and the US and Canada, are fathers *significantly* less likely to work part-time compared to non-fathers. Further descriptive analyses show that in these countries fathers tend to work longer weekly hours and more weeks per year than childless men (results not shown).

Overall, we find statistically significant bivariate relationships between fatherhood status, annual earnings, household employment dynamics, education, age, and in some countries working time patterns as well. But do these differences account for parts or all of the earnings advantage of fathers relative to men who do not live with children? To answer this, we turn to multivariate analyses.

#### Multivariate regression results

In Table 2, we show the percent change in annual earnings associated with fatherhood in each country, from Heckman regression models. Model 1 shows the gross effect of fatherhood on annual earnings. Corresponding to our descriptive analysis, we find that fathers earn more on average than men who do not live with children in the same household. These gross earnings

premiums are significant in all but two countries (Luxembourg and Italy), and range from 4.8 percent in the United States, to 25.6 percent in Finland.

-----TABLE 2 ABOUT HERE -----

Yet as predicted in hypothesis 1, Model 2 shows that part of this fatherhood premium is explained by fathers' greater potential work experience and education. In East Germany and Sweden, human capital difference explain all of the initial gross earnings differences between fathers and non-fathers, and in Canada, Finland, France, West Germany, the Netherlands, Spain, and the Britain these differences account for substantial proportions of the gross earnings differences; between 28 percent in Spain and 68 percent in the Netherlands. However, in the remaining four countries human capital differences do not explain the fatherhood premium. In the United States, the earnings gap even increases once potential labor market experience and education are taken into account.

In addition to using Heckman selection corrections and human capital measures for selection processes, we add marital status to the model in Model 3 to capture unobservable factors that may predict positive selection into marriage, fatherhood, and employment. In Model 3, the fatherhood premium decreases but remains statistically significant in 7 countries, ranging from 3.6 percent in Canada to 15.6 percent in Belgium. However, marital status explains the fatherhood premium in France, the Netherlands, Britain, and the United States. Thus, we find evidence of positive selection into co-residential fatherhood, consistent with Hypothesis 1. However, significant premiums persist in almost one-half of our included countries after controlling for selection.

To test our second hypothesis, we next include men's paid work hours in Model 4. Hypothesis 2a is supported only in the Czech Republic where including men's work hours further accounts for the fatherhood premium. Yet, fatherhood premiums in Belgium, Canada, West Germany, Spain and the Slovak Republic are robust to differences in working time between fathers and non-fathers. To ensure that these findings are not merely a result of our harmonized, but somewhat rough measure of working time, we estimate models using the best available measure for working time for each country (results not shown). Using weekly work hours and annual weeks worked (where available) reduces the fatherhood gap estimates by 1.6 percentage points in Belgium, 3 percentage points in Finland, and 2.3 percentage points in Spain, somewhat more than in the harmonized models. In West Germany, the fatherhood bonus increases in size if working time is measured using weekly working hours and annual weeks worked, indicating that childless men work more hours and weeks compared to fathers with the same level of education, age, and marital status. Only in Canada and the Slovak Republic, differences in working time between fathers and childless men do not account for a substantial portion of the fatherhood earnings gap, neither in the harmonized model, nor in the model using best available measures. Thus, we find some evidence in support of our second hypothesis that fathers' greater work hours contribute to the fatherhood premium. Though, even after controlling for marital status, human capital and labor supply measures, we find significant fatherhood bonuses in six out of fifteen countries.

Next, we test Hypothesis 2b to examine how the partner's specialization in care work/labor supply shapes the fatherhood premium. Model 5 includes the respondent's partner caregiver status. The reference category is having a partner who is full-time employed. We find significant fatherhood premiums in five countries: Belgium, the Czech Republic, Finland, the Slovak Republic and Spain. A comparison of the exponentiated coefficients from Models 4 and 5 indicates that the presence of a care providing spouse does little to explain the earnings

advantage of fathers in these five countries. However, having a care providing partner in West Germany and Canada fully accounts for the fatherhood bonuses (net of controls). Here, fathers seem to earn more than comparable childless men because they are more likely to live with a partner who specializes in care work, which may limit work-family conflict for these men.

What the additive models for men's and women's unpaid work contribution conceal, however, is how the impact of children on men's earnings may differ by household specialization type. The findings thus far represent average estimates across all partnered men aged 25 to 45 in each country. In Model 6, we provide the strongest test of Hypothesis 3, whether the fatherhood premium depends on men's divisions of labor with their partners, by including an interaction term between fatherhood status and the presence of a female caregiver. Findings shown in the last two columns 6a and 6b, indicate clear support for Hypothesis 3: it is predominantly men with female caregivers who garner a premium for fatherhood. In Canada, Britain, the United States, West Germany, Luxembourg, the Netherlands, and France, male breadwinners garner net fatherhood premiums between 5.8 and 20.9 percent, while fathers in dual-earner couples either do not fare better than childless men, or even seem to incur an earnings penalty (in West Germany, Luxembourg, the Netherlands, Britain, and the United States). In summary, our findings show that looking at average earnings differences among all partnered men masks existing earnings differences that depend on the household division of labor, and that it is important to allow for heterogeneity among (partnered) men.

Cross-National Variation in the Fatherhood Bonus

We next consider what country-level differences may be linked to the net fatherhood effects on earnings, as presented in Table 3. Our fourth hypothesis stated that fatherhood premiums should be larger in countries with greater income inequality. However, as the

correlation coefficient in Table 3 shows, the Gini Coefficient is only weakly, and negatively correlated with the fatherhood premium, indicating that larger fatherhood premiums (Model 5) are found in countries with lower earnings inequality.

TABLE 3 ABOUT HERE	
TABLE 3 ABOUT HERE	

Our fifth hypothesis considered whether cultural differences in support for maternal employment or for the male-breadwinner/female caregiver model might correlate to the fatherhood premium. Overall, these correlations shown in Table 3 are weak to moderate, and only one reached statistical significance (two-tailed test, p>.10). However, with the exception of two measures, all correlations indicated that more "traditional" gender attitudes towards maternal employment and the division of labor within the household are linked to higher fatherhood premiums for breadwinners. These findings lend weak support to hypothesis 5 and suggest that contexts which provide cultural support and legitimacy to the male-breadwinner/female-homemaker household division of labor may boost the pay of fathers.

Consistent with our expectations for the association between fatherhood premiums and welfare state regimes, we do find that specialization seems especially important in countries generally characterized as conservative (West Germany, Luxembourg, the Netherlands) and liberal welfare states (Canada, United Kingdom, United States). In these countries, men with caregiving partners primarily receive the fatherhood premium; men who lack a caregiver partner receive no premium or even incur an earnings penalty. However, findings for other countries link less clearly to welfare state regimes. For example, we would expect to find smaller fatherhood premiums in the Nordic countries where policies promote gender equality. Consistent with our expectations, we do not find fatherhood premiums in Sweden. However, we do find a net premium in Finland. Perhaps Finnish policies are less pro-active with regard to changing

understandings of fatherhood. For instance, the leave policies of the 1990s aimed at paternal support of maternal care rather than the establishment of a childrearing relationship between fathers and children in their own right (Salmi, 2006). Other country pairs present similar puzzles, such as Italy and Spain. Both countries have low female and maternal employment participation rates, and public policies traditionally favored the female care provider-male breadwinner household division of labor (e.g. granting access to health benefits for dependents of a male breadwinner) (Delegado, Meil, and Zamora López, 2008; Saraceno, 1994; Valiente, 2008). Yet, while we find a sizable net fatherhood premium in Spain, there is no evidence of a premium in Italy.

These mixed findings offer only tentative support for relationships between the fatherhood premium and cultural and institutional factors considered here. Cultural and institutional contexts that provide normative support for male breadwinning may strengthen father's position in the labor market and in the workplace. However, more research is needed to disentangle the processes that contribute to earnings differences among men based on fatherhood in order to better understand the interplay between individual, household, and contextual factors.

#### **Conclusions**

Unadjusted fatherhood premiums exist in virtually all countries. We examine the major mechanisms that contribute to this fatherhood premium: Selection processes, labor supply, and household specialization. Consistent with Hypothesis 1, we find evidence that parts of the unadjusted premiums can be accounted for by the selection of men with greater earnings potential into fatherhood, but not consistently in all countries. However, contrary to Hypothesis 2a, fathers do not earn more merely because they work more. Even with working time measures,

we find significant earnings differences between fathers and childless men in Belgium, Canada, Finland, West Germany, the Slovak Republic, and Spain. This is consistent with other studies (Glauber, 2008; Lundberg & Rose, 2000; Smith Koslowski, 2011). We also found some evidence that partner's labor supply (Hypothesis 2b) may contribute to West German and Canadian fathers' earnings advantage.

After the inclusion of controls for human capital, marital status, and men's and women's work hours, we find net fatherhood premiums for all fathers in Belgium, the Czech and Slovak Republics, Spain and Finland. However, consistent with Hypothesis 3, our findings suggest that allowing for heterogeneity among men is important, and that the fatherhood premium is strongly linked to the division of labor within households notably in conservative and liberal welfare states. Net premiums, at least for primary breadwinners, exist in all but three countries (Italy, East Germany, and Sweden).

As we cannot measure either differences in productivity or differential treatment by employers, these remaining fatherhood premiums may be explained by either or a combination of these factors. Thus far, existing evidence lends greater support for the hypothesis that employers' favorable treatment of fathers (and possibly fathers' higher likelihood of successful wage bargaining) explains the remaining significant fatherhood premiums rather than productivity arguments. Yet, studies examining the impact of parenthood on productivity (work effort per time unit) are scarce. Self-reports of work effort do not support this explanation of the fatherhood premium among American and British parents (Gorman & Kmec, 2007; Kmec, 2011). Similarly, Lobel and St. Clair (1992) find no significant effects of parenthood on productivity among professional workers in four Midwestern states in the United States. Yet past scholarship has found evidence supporting employer preferential treatment of fathers.

Correll et al.'s (2007) experimental study provides strong evidence for the possibility that favorable treatment of fathers by employers may contribute to earnings differences between fathers and non-fathers. Moreover, in wage bargaining processes, fathers may use their role as breadwinners to increase their wage bargaining power (Nelson and Bridges, 1999). The wage bargaining process can be seen as a process in which actors make claims on organizational resources (Avent-Holt and Tomaskovic-Devey, 2010), and gendered understandings of fathers as breadwinners, can be used in this process to support such claims. In contexts where the image of fatherhood emphasizes the "good provider" role, employers may be more likely to attach importance to claims based on the breadwinner role and thus fathers may be more successful than other workers in capturing organizational resources, i.e. they may be more likely to be promoted or granted an increase in earnings than childless men and women.

While more research is needed to examine how cultural and institutional contexts may shape father's employment outcomes, we do find some evidence that greater cultural support for a male primary breadwinner-female primary care provider division of labor is associated with larger fatherhood premiums (Hypothesis 4). On the other hand, we do not find that the overall earnings inequality is linked to the size of the fatherhood premiums (Hypothesis 3).

Fatherhood's impact on employment and earnings is relatively underexplored. Crossnational comparative studies focus most often on the effects of motherhood on women's labor
market outcomes in the context of different welfare state policies. We show that parenthood
shapes men's employment experiences as well, albeit in different ways. Parenthood often limits
women's employment participation, earnings, and makes them vulnerable to discrimination in
the labor market. However, men seem to benefit from parenthood, at least in terms of earnings.

Thus, we show that parenthood adds another layer to gendered labor market inequalities and may be a mechanism behind persistent gender disparities.

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#### **Notes**

- <sup>1</sup> We examine East and West Germany separately, due to continuing socio-political, and cultural differences (Rosenfeld and Trappe, 2000).
- <sup>2</sup> Lacking data on housework and childcare, we use female partners' employment hours as a proxy for the division of paid and unpaid work.
- <sup>3</sup> In Spain and Belgium, fathers seem to be disadvantaged in terms of earnings relative to men who never become fathers. Smith Koslowski (2010) notes that nonsignificant findings may be due to smaller sample sizes in the countries in question (p. 243).
- <sup>4</sup> It is unclear how much of the marriage premium is a consequence of marriage, i.e. the increased specialization and effort of men in paid work, versus the positive selection of men into marriage on factors that predict higher earnings (Nakosteen and Zimmer, 1997).
- <sup>5</sup> However, in the United States only higher order births seem to significantly impact fathers' employment hours. For example, Kaufman and Uhlenberg (Kaufman and Uhlenberg, 2000) find that fathers of three or more children increased their employment by about three hours a week.
- <sup>6</sup> We limit age to 25-45 for several reasons. Lacking consistent measures of educational enrollment, we reduce the number of students in our sample by excluding those under age 25. Since we are only able to identify men as fathers if they co-reside with children, we limit the sample to men aged 45 or younger to reduce the number of fathers whose children have moved out of the household. Furthermore, we exclude agricultural workers, those in active military service, and self-employed workers.
- <sup>7</sup> For France, Italy, and Luxembourg only net annual earnings are available.
- <sup>8</sup> In three countries were used alternate measures to construct part-time status. In Finland, the partner's part-time status was constructed using weeks worked full time and part time in the survey year. Here, part-time status was coded=1 if the number of weeks worked part-time equaled or exceeded the weeks worked full-time. In the Slovak (1992) part-time status=1 if respondents indicated whether they are employed part-time. In Sweden (2000), information on annual hours was divided by 48 (52 weeks 4 weeks vacation) to estimate weekly hours.
- <sup>9</sup> We also estimate OLS regression models (results not shown), restricting the samples to respondents with positive earnings. The fatherhood effects are largely robust, but less conservative compared to the estimates from the Heckman selection models.
- <sup>10</sup> Men with higher earnings potential may be more likely to be in male breadwinner relationships, since they are more likely to earn enough to support a family with one income. If these men are also more likely to become fathers, this may explain part of the fatherhood premium. However, it is equally plausible that lower earning men are more likely to be in male breadwinner relationships, especially in countries/areas with few affordable childcare service options. To ensure robustness of our results in models not presented we included a selection term (Inverse Mills Ratio) controlling for selection into male breadwinner relationships, emulating a two-step Heckman selection model where educational attainment, the presence of an adult female (other than the spouse or partner), other household income (minus the respondent's income), and an indicator for residence in an urban area (instrumental variable) as predictors of being in a male breadwinner relationship. Our findings proved robust.
- <sup>11</sup> This is not true for the Czech and Slovak Republics where the coverage of childcare services for very young children starkly decreased since 1989. The tradition of women's and mothers' (full-time) employment remains relatively strong, and the lower levels of earnings also necessitate two incomes for most families in Eastern European countries (Glass and Fodor, 2007; Saxonberg and Szelewa, 2007).

<sup>&</sup>lt;sup>12</sup> The full regression models are available in the supplemental tables.

Table 1. Weighted Means and Standard Deviations for Selected Characteristics, by Country and Fatherhood Status

	N	Earnings	(in nat'l curr.)	M	arried		Age	High l	Education	Part-t	ime Emp.	Care pr	ov. partner
Country <sup>a</sup>		childless	Father	childless	Father	childless	Father	childless	Father	childless	Father	childless	father
Belgium	722	924775 (468806)	1052900 *** (545313)	.534 (.501)	.831 *** (.375)	33.683 (6.673)	37.768 *** (4.784)	.407 (.493)	.311 * (.463)	.121 (.327)	.072 (.259)	.406 (.493)	.535 ** (.499)
Canada	6530	41398 (54057)	48195 *** (47199)	.627 (.484)	.85 *** (.357)	33.728 (5.883)	37.447 *** (5.219)	.236 (.425)	.187 *** (.390)	.036 (.187)	.027 + (.161)	.250 (.433)	.467 *** (.499)
Czech Rep.	6321	140833 (90965)	146214 ** (91349)	.729 (.445)	.965 *** (.185)	33.796 (6.555)	36.429 *** (5.692)	.151 (.359)	.134 (.341)	.007 (.085)	.007 (.082)	.160 (.367)	.349 *** (.477)
Finland	2047	136431 (78504)	164213 *** (91675)	.285 (.452)	.768 *** (.422)	32.321 (5.812)	36.880 *** (5.324)	.229 (.421)	.206 (.405)	.052 (.222)	.011 *** (.105)	.246 (.431)	.335 ** (.472)
France	2370	107589 (64375)	126336 *** (83945)	.369 (.483)	.775 *** (.417)	31.750 (5.709)	36.854 *** (5.235)	.191 (.393)	.121 *** (.327)	.057 (.233)	.026 ** (.160)	.294 (.456)	.478 *** (.500)
Germany East	699	37239 (22623)	44000 (24923)	.412 (.494)	.833 *** (.373)	33.202 (6.208)	37.701 *** (4.899)	.173 (.380)	.258 (.438)	.038 (.191)	.020 (.142)	.337 (.475)	.452 *** (.498)
Germany West	2332	60997 (34848)	70334 *** (47408)	.546 (.498)	.926 *** (.262)	34.390 (5.611)	37.395 *** (4.878)	.355 (.479)	.283 (.450)	.050 (.217)	.023 * (.151)	.295 (.457)	.816 *** (.387)
Italy	1347	26800000 (13000000)	27700000 (13700000)	.897 (.305)	.982 *** (.131)	34.654 (5.021)	38.613 *** (4.615)	.142 (.350)	.090 * (.287)	.014 (.118)	.024 (.154)	.360 (.481)	.631 *** (.483)
Luxembourg	764	1318405 (775908)	1378901 (792182)	.569 (.496)	.928 *** (.258)	32.531 (5.022)	37.443 *** (5.027)	.465 (.500)	.282 *** (.450)	.009 (.092)	.005 (.068)	.194 (.396)	.738 *** (.440)
Netherlands ('99)	1617	56451 (24581)	66414 *** (35420)	.308 (.462)	.859 *** (.348)	32.599 (5.545)	37.328 *** (4.882)	.361 (.481)	.273 ** (.446)	.045 (.207)	.026 (.160)	.272 (.446)	.864 *** (.343)
Slovak Rep. ('92)	5358	47467 (27528)	53447 *** (26531)	.909 (.288)	.984 *** (.127)	34.439 (6.467)	35.910 *** (5.589)	.152 (.359)	.135 (.342)	.015 (.122)	.009 (.097)	.129 (.336)	.318 *** (.466)
Spain	1109	2407226 (1369791)	2610123 * (1719749)	.796 (.403)	.953 *** (.211)	32.147 (4.351)	37.179 *** (5.042)	.244 (.430)	.136 *** (.343)	.046 (.210)	.041 (.198)	.373 (.484)	.652 *** (.477)
Sweden	2769	239370 (137325)	275768 ** (310323)	.259 (.438)	.634 *** (.482)	32.267 (5.785)	36.920 *** (5.187)	.214 (.410)	.148 *** (.355)	.115 (.319)	.068 *** (.251)	.350 (.477)	.391 (.488)
UK ('99)	5140	21406 (15940)	21675 (22084)	.531 (.499)	.874 *** .332	33.498 (5.814)	36.848 *** (5.203)	.310 (.463)	.197 *** (.398)	.022 (.146)	.020 (.140)	.197 (.398)	.693 *** (.461)
USA	11071	44661 (45270)	48180 ** (49788)	.757 (.429)	.947 *** .223	34.492 (6.257)	36.721 *** (5.490)	.365 (.482)	.276 *** (.447)	.020 (.140)	.014 * (.117)	.282 (.450)	.474 *** (.499)

Notes: \*\*\*p<.001, \*\*p<.01, \*p<.01, \*p<.05, +p<.10. a Country data are from 2000, unless otherwise indicated. We test for significant differences between fathers and non-fathers on continuous variables using t-tests (with unequal variance) and the two-sample Wilcoxon rank-sum test as a non-parametric alternative since variables like earnings, hours, or weeks worked are most likely very skewed. For binary variables we use chi-square tests.

Table 2. Exponentiated coefficients for the effect of fatherhood on the natural log of annual earnings from Heckman regression models

	Gross Fatherhood	2 Plus Human	3 Plus Marital	4 Plus Labor	5 Plus Care Providing	6a <b>Bonus</b> dual-earner	6b <b>Bonus main male</b>
	Effect	Capital	Status	Supply	Partner		breadwinner
Belgium	18.3 ***	16.9***	15.6**	16.2**	15.8**	15.8	15.8
Canada	15.7***	8.2 ***	4.5+	4.2+	2.7	-0.8	12.0
Czech Republic	6.7 **	6.4 **	3.6+	3.3	3.8+	3.8	3.8
Finland	25.6***	16.1 ***	9.7*	8.0*	8.2*	8.2	8.2
France	20.1 ***	6.6*	3.1	1.7	2.1	-3.6	14.7
Italy	2.4	-0.3	-0.6	0.2	1.0	-	-
Germany East	13.6*	-0.7	-4.9	-3.6	-3.2	-	-
Germany West	16.7***	8.0*	6.0 +	6.0+	-1.1	-15.3	20.9
Luxembourg	3.5	0.3	-4.0	-4.0	-7.8+	-12.7	5.8
Netherlands	15.6***	5.0	-1.4	-1.9	-4.1	-19.0	9.9
Slovak Republic	12.2 ***	11.9 ***	10.7 ***	11.0 ***	11.0 ***	11.0	11.0
Spain	14.4***	10.3*	10.1*	8.9*	10.1*	10.1	10.1
Sweden	15.2***	4.9	4.0	-1.3	-0.8	-	-
UK	6.5 **	3.7+	1.1	0.4	-1.8	-5.4	7.2
US	4.8 **	5.3 **	0.9	0.7	-0.7	-5.4	10.0

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Note: In the two results columns based on Model 6, we display significant coefficients in bold font, in countries, where the fatherhood bonus does not differ for men in dual-earner and male breadwinner couples, the coefficient from the pooled models is displayed in bold/italic font in both columns.

**Table 3.** Pearson Correlation Coefficients between Fatherhood Earnings Gaps (from Pooled Model) and Country-level Attitude Measures, and Earnings Inequality (Gini Coefficient)

Country-level Measures	Pearson Correlation Coefficient
Gini	071
% respondents disagreeing with "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work"	.494 *
% respondents agreeing with "A pre-school child is likely to suffer if his or her mother works"	091
% respondents agreeing with "All in all, family life suffers when the woman has a full-time job"	.206
% respondents agreeing with "A job is all right, but what most women really want is a home and children"	.414
% disagreeing with "Both the man and woman should contribute to the household income"	415
% agreeing with "A man's job is to earn money; a woman's job is to look after the home and family"	.244

Note: Statistically significant correlations (p < .10) are marked with an asterisk. To create the country-level attitude measures, we calculate the percentage of respondents disagreeing or strongly disagreeing, respectively agreeing or strongly agreeing. The data is taken from the 1994 and 2002 Family and Gender Roles modules of the International Social Survey Programme.

#### **Supplemental Tables**

Raw Coefficients and (Standard Errors in Parentheses) from Heckman Selection Regression Models

Belgium	Model	1	Model	2	Model	3	Model	4	Model	5	Model	6
Main Model												
Parenthood Status	.168	***	.157	***	.145	**	.150	**	.146	**	.166	**
	(.046)		(.046)		(.048)		(.048)		(.048)		(.061)	
Age			.029		.029		.027		.030		.031	
			(.044)		(.044)		(.044)		(.044)		(.044)	
Age squared			.000		.000		.000		.000		.000	
			(.001)		(.001)		(.001)		(.001)		(.001)	
High Educational Attainment			.378	***	.378	***	.372	***	.374	***	.375	***
			(.036)		(.036)		(.036)		(.036)		(.036)	
Legally Married Status					.041		.033		.028		.025	
					(.049)		(.049)		(.049)		(.049)	
Part-time Status							639	***	632	***	632	***
							(.167)		(.167)		(.167)	
Presence of Care-Providing Partner									.049		.086	
									(.035)		(.080)	
Interaction Parent X Care-Providing Partner											045	
											(.087)	
Intercept	13.732	***	12.796	***	12.787	***	12.834	***	12.778	***	12.752	***
	(.042)		(.772)		(.772)		(.766)		(.766)		(.768)	
Selection Model												
High Educational Attainment	.903	***	.336	+	.331	+	.338	+	.327	+	.332	+
	(.167)		(.186)		(.186)		(.186)		(.185)		(.185)	
Disability Status	425	*	488	**	476	**	485	**	495	**	484	**
	(.169)		(.175)		(.175)		(.176)		(.174)		(.175)	
Age	.018		001		002		001		001		001	
	(.014)		(.015)		(.015)		(.015)		(.015)		(.015)	
Other Household Income	.020	+	.024	*	.024	*	.024	*	.026	*	.025	*
	(.011)		(.011)		(.011)		(.011)		(.011)		(.011)	
Constant	.466		1.494	*	1.512	*	1.476	*	1.462	*	1.463	*
	(.547)		(.593)		(.594)		(.591)		(.588)		(.588)	
N	672		672		672		672		672		672	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Canada	Model	1	Model	2	Model	3	Model	4	Model	5	Model	6
Main Model												
Parenthood Status	.146	***	.079	***	.044	+	.041	+	.026		008	
	(.023)		(.023)		(.024)		(.023)		(.024)		(.028)	
Age			.081	***	.073	***	.070	***	.069	**	.068	**
			(.021)		(.021)		(.021)		(.021)		(.021)	
Age squared			001	**	001	*	001	*	001	*	001	*
			(.000)		(.000)		(.000)		(.000)		(.000)	
High Educational Attainment			.340	***	.321	***	.332	***	.331	***	.330	***
			(.027)		(.027)		(.026)		(.026)		(.026)	
Legally Married Status					.171	***	.167	***	.167	***	.166	***
					(.023)		(.023)		(.023)		(.023)	
Part-time Status							733	***	733	***	729	***
							(.052)		(.052)		(.052)	
Presence of Care-Providing Partner									.069	***	030	
									(.019)		(.044)	
Interaction Parent X Care-Providing Partner											.121	*
											(.049)	
Intercept	10.427	***	8.622	***	8.691	***	8.771	***	8.777	***	8.815	***
	(.020)		(.372)		(.370)		(.365)		(.365)		(.365)	
Selection Model												
High Educational Attainment	.638	***	.318	**	.332	**	.321	**	.316	**	.315	**
	(.097)		(.103)		(.104)		(.103)		(.103)		(.103)	
Disability Status	710	***	725	***	720	***	735	***	727	***	729	***
	(.055)		(.056)		(.056)		(.057)		(.057)		(.057)	
Age	.015	**	003		003		003		003		003	
	(.005)		(.005)		(.005)		(.005)		(.005)		(.005)	
Other Household Income	.012	***	.013	***	.013	***	.013	***	.014	***	.015	***
	(.002)		(.003)		(.003)		(.003)		(.003)		(.003)	
Constant	.928	***	1.632	***	1.638	***	1.659	***	1.656	***	1.654	***
	(.177)		(.179)		(.179)		(.181)		(.181)		(.181)	
N	6521		6521		6521		6521	_	6521		6521	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Czech Republic	Model 1	Mod	el 2	Model	3	Model	4	Model	5	Model	6
Main Model											
Parenthood Status	.065 *	.06	2 **	.035	+	.033		.037	+	.029	
	(.021)	(.020	))	(.021)		(.020)		(.021)		(.022)	
Age		.04	0 **	.038	**	.039	**	.037	**	.038	**
		(.013	5)	(.013)		(.013)		(.013)		(.013)	
Age squared		00	1 **	001	**	001	**	001	**	001	**
		000.)	))	(.000)		(.000)		(.000)		(.000)	
High Educational Attainment		.51	5 ***	.513	***	.521	***	.521	***	.521	***
		(.017	<b>'</b> )	(.017)		(.017)		(.017)		(.017)	
Legally Married Status				.120	***	.123	***	.122	***	.121	***
				(.026)		(.026)		(.026)		(.026)	
Part-time Status						541	***	540	***	540	***
						(.067)		(.067)		(.067)	
Presence of Care-Providing Partner								015		061	
								(.013)		(.052)	
Interaction Parent X Care-Providing Partner										.049	
										(.054)	
Intercept	7.155 *	*** 6.38	4 ***	6.318	***	6.309	***	6.348	***	6.348	***
	(.020)	(.222	2)	(.222)		(.221)		(.223)		(.223)	
Selection Model											
High Educational Attainment	1.287 *	·** .57	0 ***	.570	***	.561	***	.559	***	.559	***
	(.136)	(.144	.)	(.144)		(.144)		(.144)		(.144)	
Disability Status	-1.951 *	-2.07	3 ***	-2.074	***	-2.067	***	-2.069	***	-2.070	***
	(.159)	(.167	<b>'</b> )	(.167)		(.166)		(.166)		(.166)	
Age	026 *	02	8 ***	028	***	029	***	028	***	028	***
	(.006)	(.006)	5)	(.006)		(.006)		(.006)		(.006)	
Other Household Income	.070 *	.07	7 ***	.076	***	.077	***	.076	***	.076	***
	(.014)	(.015	5)	(.015)		(.015)		(.015)		(.015)	
Constant	2.512 *	*** 2.73		2.730	***	2.743	***	2.741	***	2.742	***
	(.222)	(.223	5)	(.223)		(.223)		(.223)		(.223)	
N	6321	632	1	6321		6321		6321		6321	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Finland	Model	1	Model	2	Model	3	Model	4	Model 5		Model	6
Main Model												
Parenthood Status	.228	***	.149	***	.092	*	.077	*	.079	*	.061	
	(.037)		(.038)		(.040)		(.039)		(.039)		(.045)	
Age			.099	**	.088	*	.057	+	.057	+	.057	+
			(.035)		(.035)		(.034)		(.034)		(.034)	
Age squared			001	*	001	*	001		001		001	
			(000.)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment			.490	***	.467	***	.461	***	.460	***	.459	***
			(.036)		(.036)		(.035)		(.035)		(.035)	
Legally Married Status					.158	***	.158	***	.158	***	.158	***
					(.036)		(.036)		(.036)		(.036)	
Part-time Status							907	***	904	***	895	***
							(.095)		(.095)		(.095)	
Presence of Care-Providing Partner									011		060	
									(.032)		(.069)	
Interaction Parent X Care-Providing Partner											.062	
											(.076)	
Intercept	11.791	***	9.706	***	9.901	***	10.493	***	10.495	***	10.506	***
	(.033)		(.608)		(.606)		(.597)		(.597)		(.596)	
Selection Model												
High Educational Attainment	.793	***	.271		.268		.310	+	.313	+	.308	+
	(.162)		(.179)		(.179)		(.181)		(.182)		(.181)	
Disability Status	-2.105	***	-2.319	***	-2.354	***	-2.126	***	-2.130	***	-2.132	***
	(.345)		(.353)		(.353)		(.316)		(.316)		(.315)	
Age	.007		010		010		009		009		009	
	(.009)		(.009)		(.009)		(.009)		(.009)		(.009)	
Other Household Income	.023	***	.026	***	.025	***	.024	***	.024	***	.024	***
	(.006)		(.006)		(.006)		(.006)		(.006)		(.006)	
Constant	.857	*	1.638	***	1.629	***	1.625	***	1.622	***	1.629	***
	(.341)		(.339)		(.338)		(.338)		(.338)		(.338)	
N	2047		2047		2047		2047		2047		2047	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

France	Model	1	Model	2	Model	3	Model	4	Model 5		Model	6
Main Model												
Parenthood Status	.183	***	.064	*	.031		.017		.021		036	
	(.031)		(.032)		(.033)		(.032)		(.033)		(.038)	
Age			.146	***	.137	***	.135	***	.136	***	.135	***
			(.027)		(.027)		(.027)		(.026)		(.026)	
Age squared			002	***	002	***	002	***	002	***	002	***
			(000.)		(000.)		(000.)		(.000)		(000.)	
High Educational Attainment			.514	***	.513	***	.545	***	.545	***	.542	***
			(.033)		(.033)		(.032)		(.032)		(.032)	
Legally Married Status					.103	***	.105	***	.107	***	.106	***
					(.027)		(.027)		(.027)		(.027)	
Part-time Status							739	***	736	***	737	***
							(.060)		(.060)		(.060)	
Presence of Care-Providing Partner									023		169	**
									(.022)		(.055)	
Interaction Parent X Care-Providing Partner											.174	**
											(.060)	
Intercept	11.505	***	8.572	***	8.703	***	8.779	***	8.782	***	8.832	***
	(.028)		(.475)		(.475)		(.460)		(.460)		(.459)	
Selection Model												
High Educational Attainment	1.430	***	.759	**	.755	**	.667	**	.668	**	.652	**
	(.220)		(.236)		(.235)		(.238)		(.238)		(.237)	
Disability Status	-1.087	***	-1.173	***	-1.169	***	-1.263	***	-1.265	***	-1.267	***
	(.144)		(.150)		(.148)		(.156)		(.156)		(.157)	
Age	.009		017	+	018	+	021	*	021	*	022	*
	(.010)		(.009)		(.009)		(.010)		(.010)		(.010)	
Other Household Income	.025	***	.028	***	.028	***	.031	***	.030	***	.030	***
	(.007)		(.007)		(.007)		(.008)		(.008)		(800.)	
Constant	1.105	**	2.198	***	2.203	***	2.362	***	2.369	***	2.412	***
	(.372)		(.357)		(.356)		(.365)		(.365)		(.365)	
N	2370		2370		2370		2370		2370		2370	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Italy	Model	1	Model	2	Model	3	Model	4	Model	5	Model	6
Main Model												
Parenthood Status	.023		003		006		.002		.010		016	
	(.032)		(.032)		(.033)		(.031)		(.031)		(.042)	
Age			.078	*	.077	*	.076	*	.075	*	.075	*
			(.031)		(.031)		(.030)		(.030)		(.030)	
Age squared			001	*	001	*	001	*	001	*	001	*
			(000.)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment			.381	***	.381	***	.405	***	.400	***	.400	***
			(.040)		(.040)		(.038)		(.038)		(.038)	
Legally Married Status					.056		.077		.083		.087	
					(.068)		(.064)		(.064)		(.065)	
Part-time Status							522	***	514	***	513	***
							(.058)		(.058)		(.058)	
Presence of Care-Providing Partner									034		081	
									(.023)		(.055)	
Interaction Parent X Care-Providing Partner											.056	
											(.060)	
Intercept	10.248	***	8.603	***	8.582	***	8.589	***	8.616	***	8.630	***
	(.030)		(.569)		(.570)		(.542)		(.542)		(.542)	
Selection Model												
High Educational Attainment	.634	***	.023		.023		028		025		027	
	(.171)		(.190)		(.190)		(.189)		(.189)		(.189)	
Disability Status	-1.602	***	-1.643	***	-1.643	***	-1.686	***	-1.692	***	-1.695	***
	(.294)		(.304)		(.304)		(.309)		(.311)		(.311)	
Age	.028	**	.011		.011		.010		.010		.010	
	(.010)		(.010)		(.010)		(.010)		(.010)		(.010)	
Other Household Income	.036	***	.038	***	.038	***	.039	***	.036	***	.036	***
	(.008)		(.009)		(.009)		(.009)		(.009)		(.009)	
Constant	.149		.871	*	.873	*	.935	*	.944	*	.947	*
	(.382)		(.389)		(.389)		(.395)		(.395)		(.395)	
N	1347		1347		1347		1347		1347		1347	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

<b>Germany East</b>	Model	1	Model	2	Model	3	Model	4	Model	5	Model	6
Main Model												
Parenthood Status	.128	*	007		050		037		032		054	
	(.065)		(.070)		(.072)		(.070)		(.071)		(.081)	
Age			.283	***	.261	***	.239	***	.240	***	.237	***
			(.055)		(.056)		(.054)		(.054)		(.054)	
Age squared			004	***	004	***	003	***	003	***	003	***
			(.001)		(.001)		(.001)		(.001)		(.001)	
High Educational Attainment			.338	***	.343	***	.353	***	.353	***	.353	***
			(.062)		(.062)		(.061)		(.061)		(.061)	
Legally Married Status					.144	*	.144	*	.145	*	.145	*
					(.063)		(.061)		(.061)		(.061)	
Part-time Status							761	***	759	***	768	***
							(.120)		(.121)		(.122)	
Presence of Care-Providing Partner									019		078	
									(.050)		(.117)	
Interaction Parent X Care-Providing Partner											.072	
											(.128)	
Intercept	10.525	***	5.380	***	5.778	***	6.204	***	6.190	***	6.262	***
	(.061)		(.965)		(.975)		(.944)		(.946)		(.954)	
Selection Model												
High Educational Attainment	.766	***	.518	*	.463	+	.493	*	.491	*	.490	*
	(.194)		(.244)		(.241)		(.232)		(.231)		(.231)	
Disability Status	.056		.054		021		009		023		023	
	(.266)		(.303)		(.306)		(.313)		(.317)		(.320)	
Age	007		018		016		017		017		017	
	(.013)		(.012)		(.012)		(.012)		(.012)		(.012)	
Other Household Income	.007		.008		.009		.008		.008		.008	
	(.006)		(.007)		(.007)		(.007)		(.007)		(.007)	
Constant	1.215	*	1.719	***	1.688	***	1.713	***	1.721	***	1.747	***
	(.474)		(.448)		(.451)		(.452)		(.454)		(.458)	
N	641		641		641		641		641		641	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

<b>Germany West</b>	Model	1	Model	2	Model	3	Model	4	Model 5		Model	6
Main Model												
Parenthood Status	.155	***	.077	*	.059	+	.058	+	011		165	***
	(.032)		(.031)		(.034)		(.032)		(.036)		(.045)	
Age			.158	***	.156	***	.144	***	.145	***	.140	***
			(.031)		(.031)		(.030)		(.030)		(.029)	
Age squared			002	***	002	***	002	***	002	***	002	***
			(000.)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment			.364	***	.364	***	.368	***	.362	***	.359	***
			(.028)		(.028)		(.027)		(.027)		(.027)	
Legally Married Status					.051		.043		.028		.018	
					(.037)		(.036)		(.036)		(.036)	
Part-time Status							951	***	953	***	950	***
							(.065)		(.064)		(.064)	
Presence of Care-Providing Partner									.131	***	116	*
									(.030)		(.053)	
Interaction Parent X Care-Providing Partner											.355	***
											(.064)	
Intercept	10.928	***	7.564	***	7.580	***	7.871	***	7.815	***	7.963	***
	(.028)		(.548)		(.548)		(.526)		(.523)		(.520)	
Selection Model												
High Educational Attainment	.605	***	.151		.148		.195	+	.196	+	.197	+
	(.104)		(.115)		(.115)		(.116)		(.116)		(.117)	
Disability Status	559	***	610	***	611	***	623	***	630	***	587	***
	(.154)		(.158)		(.159)		(.162)		(.162)		(.165)	
Age	.038	***	.003		.003		.004		.004		.004	
	(.009)		(.009)		(.009)		(.009)		(.009)		(.009)	
Other Household Income	.001		.001		.001		.001		.003		.002	
	(.003)		(.003)		(.003)		(.004)		(.004)		(.004)	
Constant	030		1.463	***	1.469	***	1.447	***	1.448	***	1.463	***
	(.334)		(.317)		(.317)		(.324)		(.323)		(.322)	
N	2166		2166		2166		2166		2166		2166	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Luxembourg	Model 1		Model	2	Model	3	Model 4		Model	5	Model	6
Main Model												
Parenthood Status	.034		.003		041		041		081	+	136	**
	(.042)		(.038)		(.040)		(.040)		(.042)		(.049)	
Age			.061		.058		.068	+	.068	+	.064	+
			(.039)		(.038)		(.038)		(.038)		(.038)	
Age squared			001		.000		001		001		001	
			(.001)		(.001)		(.001)		(.001)		(.001)	
High Educational Attainment			.512	***	.517	***	.518	***	.520	***	.519	***
			(.034)		(.034)		(.033)		(.033)		(.033)	
Legally Married Status					.141	**	.148	***	.121	**	.123	**
					(.045)		(.045)		(.045)		(.045)	
Part-time Status							745	***	730	***	735	***
							(.211)		(.210)		(.210)	
Presence of Care-Providing Partner									.108	**	044	
									(.037)		(.078)	
Interaction Parent X Care-Providing Partner											.192	*
											(.087)	
Intercept	13.966	***	12.333	***	12.302	***	12.122	***	12.162	***	12.242	***
	(.036)		(.666)		(.661)		(.655)		(.652)		(.651)	
Selection Model												
High Educational Attainment	1.236	**	.572		.557		.563		.550		.554	
	(.396)		(.444)		(.443)		(.444)		(.441)		(.440)	
Disability Status	-1.783	***	-2.086	***	-2.096	***	-2.098	***	-2.097	***	-2.094	***
	(.328)		(.323)		(.321)		(.320)		(.320)		(.321)	
Age	038		075	**	075	**	075	**	075	**	074	**
	(.032)		(.029)		(.029)		(.028)		(.029)		(.029)	
Other Household Income	007		007		006		006		005		005	
	(.009)		(.011)		(.011)		(.011)		(.011)		(.011)	
Constant	3.503	**	5.202	***	5.213	***	5.210	***	5.193	***	5.165	***
	(1.304)		(1.151)		(1.149)		(1.144)		(1.156)		(1.162)	
N	759		759		759		759		759		759	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Netherlands	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Main Model						
Parenthood Status	.145 ***	.048	014	020	042	210 ***
	(.032)	(.034)	(.038)	(.036)	(.041)	(.055)
Age		.140 ***	.127 ***	.128 ***	.127 ***	.125 ***
		(.034)	(.034)	(.032)	(.032)	(.032)
Age squared		002 ***	001 **	001 ***	001 **	001 **
		(.000.)	(.000)	(.000.)	(.000.)	(.000)
High Educational Attainment		.248 ***	.258 ***	.275 ***	.275 ***	.277 ***
		(.033)	(.032)	(.030)	(.030)	(.030)
Legally Married Status			.147 ***	.127 ***	.124 ***	.121 ***
			(.039)	(.037)	(.037)	(.037)
Part-time Status				875 ***	869 ***	851 ***
				(.064)	(.064)	(.064)
Presence of Care-Providing Partner					.043	125 *
					(.036)	(.052)
Interaction Parent X Care-Providing Partner						.305 ***
						(.070)
Intercept	10.967 ***	8.079 ***	8.272 ***	8.247 ***	8.260 ***	8.336 ***
	(.027)	(.600)	(.597)	(.567)	(.566)	(.566)
Selection Model						
High Educational Attainment	.550 ***	.224 *	.227 *	.231 *	.230 *	.219 +
	(.097)	(.111)	(.111)	(.115)	(.115)	(.115)
Disability Status	311 **	327 ***	333 ***	329 **	331 **	336 **
	(.097)	(.099)	(.098)	(.103)	(.103)	(.104)
Age	.016 +	008	008	008	008	010
	(.009)	(.009)	(.009)	(.009)	(.009)	(.009)
Other Household Income	006 +	007 *	007 *	005	004	004
	(.003)	(.003)	(.003)	(.004)	(.004)	(.004)
Constant	.646 +	1.695 ***	1.699 ***	1.716 ***	1.697 ***	1.801 ***
	(.343)	(.345)	(.345)	(.358)	(.359)	(.364)
N	1444	1444	1444	1444	1444	1444

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Slovak Republic	Model 1	Model	Model 2		Model 3		Model 4		Model 5		6
Main Model											
Parenthood Status	.115 *	** .112	***	.102	***	.104	***	.104	***	.096	**
	(.029)	(.027)		(.028)		(.027)		(.027)		(.029)	
Age		.034	*	.033	*	.027	*	.027	*	.028	*
		(.014)		(.014)		(.013)		(.013)		(.013)	
Age squared		.000	*	.000	*	.000	+	.000	+	.000	+
		(.000)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment		.356	***	.354	***	.352	***	.352	***	.352	***
		(.018)		(.018)		(.018)		(.018)		(.018)	
Legally Married Status				.150	***	.142	**	.142	**	.142	**
				(.044)		(.044)		(.044)		(.044)	
Part-time Status						522	***	522	***	521	***
						(.053)		(.053)		(.053)	
Presence of Care-Providing Partner								.000		060	
								(.014)		(.081)	
Interaction Parent X Care-Providing Partner										.062	
										(.082)	
Intercept	6.195 **	** 5.492	***	5.365	***	5.464	***	5.464	***	5.468	***
	(.028)	(.235)		(.238)		(.236)		(.239)		(.239)	
Selection Model											
High Educational Attainment	.714 **	** .134		.136		.134		.134		.134	
	(.079)	(.089)		(.089)		(.089)		(.089)		(.089)	
Disability Status	-1.830 **	** -1.905	***	-1.908	***	-1.636	***	-1.636	***	-1.637	***
	(.098)	(.099)		(.099)		(.101)		(.101)		(.101)	
Age	.003	004		004		004		004		004	
	(.005)	(.005)		(.005)		(.005)		(.005)		(.005)	
Other Household Income	.152 **	** .164	***	.167	***	.164	***	.164	***	.164	***
	(.026)	(.027)		(.027)		(.027)		(.028)		(.028)	
Constant	1.131 **	** 1.480	***	1.481	***	1.463	***	1.464	***	1.462	***
	(.164)	(.173)		(.173)		(.174)		(.174)		(.174)	
N	5357	5357		5357		5357		5357		5357	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Spain	Model 1	Model	2	Model	3	Model	4	Model	5	Model	6
Main Model											
Parenthood Status	.134 **	** .098	*	.096	*	.086	*	.096	*	.038	
	(.038)	(.038)		(.039)		(.037)		(.039)		(.050)	
Age		.061		.060		.061		.061		.061	
		(.039)		(.040)		(.038)		(.038)		(.038)	
Age squared		001		001		001		001		001	
		(.001)		(.001)		(.001)		(.001)		(.001)	
High Educational Attainment		.528	***	.528	***	.544	***	.536	***	.536	***
		(.045)		(.045)		(.043)		(.043)		(.043)	
Legally Married Status				.015		022		023		021	
				(.060)		(.058)		(.058)		(.057)	
Part-time Status						-1.026	***	-1.034	***	-1.034	***
						(.104)		(.104)		(.104)	
Presence of Care-Providing Partner								037		125	*
-								(.033)		(.058)	
Interaction Parent X Care-Providing Partner										.125	+
										(.069)	
Intercept	14.606 **	** 13.148	***	13.143	***	13.159	***	13.163	***	13.195	***
	(.033)	(.696)		(.696)		(.670)		(.669)		(.669)	
Selection Model											
High Educational Attainment	.966 *	** .242		.242		.299		.311		.294	
	(.181)	(.207)		(.207)		(.216)		(.217)		(.215)	
Disability Status	737 *:	**819	***	819	***	811	***	812	***	820	***
	(.133)	(.136)		(.136)		(.141)		(.142)		(.142)	
Age	.029 *:	* .005		.005		.002		.003		.002	
	(.011)	(.012)		(.012)		(.012)		(.012)		(.012)	
Other Household Income	.012 *		*	.013	*	.012	+	.011	+	.012	+
	(.005)	(.006)		(.006)		(.006)		(.007)		(.007)	
Constant	.357	1.412	***	1.409	***	1.541	***	1.545	***	1.549	***
	(.406)	(.424)		(.425)		(.439)		(.441)		(.439)	
N	1091	1091		1091		1091		1091		1091	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

Sweden	Model 1		Model 2		Model 3		<b>Model 4</b>		Model 5		Model 6	
Main Model												
Parenthood Status	.141	***	.048		.039		013		008		001	
	(.038)		(.040)		(.041)		(.032)		(.032)		(.038)	
Age			.092	**	.092	**	.055	*	.052	*	.053	*
			(.034)		(.034)		(.027)		(.027)		(.027)	
Age squared			001	*	001	*	001		001		001	
			(000.)		(.000)		(.000)		(.000)		(.000)	
High Educational Attainment			.356	***	.353	***	.347	***	.346	***	.347	***
			(.041)		(.042)		(.032)		(.032)		(.032)	
Legally Married Status					.031		.050	*	.049	*	.049	*
					(.031)		(.025)		(.025)		(.025)	
Part-time Status							-1.226	***	-1.218	***	-1.218	***
							(.044)		(.044)		(.044)	
Presence of Care-Providing Partner									047	+	030	
									(.024)		(.055)	
Interaction Parent X Care-Providing Partner											021	
											(.060)	
Intercept	12.259	***	10.250	***	10.265	***	11.195	***	11.260	***	11.244	***
	(.034)		(.593)		(.593)		(.467)		(.468)		(.470)	
Selection Model												
High Educational Attainment	.556	***	.262	+	.261	+	.194		.190		.190	
	(.131)		(.140)		(.140)		(.139)		(.139)		(.139)	
Disability Status	-1.968	***	-1.985	***	-1.979	***	-1.618	***	-1.630	***	-1.629	***
	(.273)		(.276)		(.276)		(.274)		(.274)		(.274)	
Age	.008		011		011		014	+	014	+	014	+
	(800.)		(800.)		(.008)		(.008)		(.008)		(800.)	
Other Household Income	.027	***	.027	***	.026	***	.033	***	.032	***	.032	***
	(.004)		(.004)		(.004)		(.005)		(.005)		(.005)	
Constant	.858	**	1.600	***	1.603	***	1.780	***	1.792	***	1.790	***
	(.276)		(.277)		(.277)		(.292)		(.292)		(.292)	
N	2760		2760	_	2760	_	2760		2760		2760	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

UK	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Main Model												
Parenthood Status	.063	**	.036	+	.011		.004		018		055	*
	(.019)		(.019)		(.020)		(.019)		(.021)		(.024)	
Age			.094	***	.088	***	.094	***	.091	***	.091	***
			(.020)		(.020)		(.018)		(.018)		(.018)	
Age squared			001	***	001	***	001	***	001	***	001	***
			(000.)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment			.424	***	.420	***	.425	***	.426	***	.425	***
			(.020)		(.020)		(.018)		(.018)		(.018)	
Legally Married Status					.087	***	.085	***	.084	***	.085	***
					(.022)		(.020)		(.020)		(.020)	
Part-time Status							-1.326	***	-1.326	***	-1.327	***
							(.054)		(.054)		(.054)	
Presence of Care-Providing Partner									.047	**	052	
									(.018)		(.038)	
Interaction Parent X Care-Providing Partner											.125	**
											(.043)	
Intercept	9.967	***	7.945	***	8.036	***	7.942	***	7.982	***	7.990	***
	(.017)		(.342)		(.342)		(.322)		(.322)		(.322)	
Selection Model												
High Educational Attainment	.761	***	.317	***	.317	***	.288	***	.290	***	.291	***
	(.066)		(.070)		(.070)		(.070)		(.070)		(.070)	
Disability Status	721	***	800	***	800	***	850	***	843	***	843	***
	(.052)		(.055)		(.055)		(.057)		(.057)		(.057)	
Age	.016	***	.002		.002		.001		.001		.001	
	(.004)		(.005)		(.005)		(.005)		(.005)		(.005)	
Other Household Income	.015	***	.018	***	.018	***	.019	***	.019	***	.019	***
	(.002)		(.002)		(.002)		(.002)		(.002)		(.002)	
Constant	.452	**	1.097	***	1.095	***	1.139	***	1.129	***	1.136	***
	(.160)		(.165)		(.165)		(.167)		(.167)		(.167)	
N	5130		5130		5130		5130		5130		5130	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test

US	Model 1		Model	2	Model	3	Model 4		Model 5		Model 6	
Main Model												
Parenthood Status	.047	**	.052	**	.009		.007		007		055	**
	(.018)		(.017)		(.017)		(.017)		(.017)		(.020)	
Age			.103	***	.094	***	.090	***	.089	***	.088	***
			(.016)		(.016)		(.016)		(.016)		(.016)	
Age squared			001	***	001	***	001	***	001	***	001	***
			(.000)		(000.)		(000.)		(.000)		(.000)	
High Educational Attainment			.609	***	.594	***	.593	***	.588	***	.585	***
			(.015)		(.015)		(.015)		(.015)		(.015)	
Legally Married Status					.241	***	.238	***	.236	***	.235	***
					(.024)		(.024)		(.024)		(.024)	
Part-time Status							705	***	711	***	703	***
							(.052)		(.052)		(.052)	
Presence of Care-Providing Partner									.067	***	054	+
									(.014)		(.031)	
Interaction Parent X Care-Providing Partner											.150	***
											(.035)	
Intercept	10.474	***	8.099	***	8.091	***	8.176	***	8.177	***	8.226	***
	(.016)		(.274)		(.273)		(.271)		(.270)		(.270)	
Selection Model												
High Educational Attainment	.709	***	.198	**	.198	**	.196	**	.193	**	.193	**
	(.062)		(.062)		(.062)		(.062)		(.062)		(.062)	
Disability Status	-1.773	***	-1.933	***	-1.935	***	-1.941	***	-1.935	***	-1.935	***
	(.063)		(.065)		(.065)		(.065)		(.065)		(.065)	
Age	.015	***	002		002		002		002		002	
	(.004)		(.004)		(.004)		(.004)		(.004)		(.004)	
Other Household Income	.001		.001		.001		.001		.002	+	.002	+
	(.001)		(.001)		(.001)		(.001)		(.001)		(.001)	
Constant	1.148	***	1.982	***	1.985	***	1.984	***	1.979	***	1.980	***
	(.158)		(.155)		(.156)		(.156)		(.156)		(.156)	
N	11071		11071		11071		11071		11071		11071	

<sup>\*\*\*</sup>p<.001, \*\*p<.01, \*p<.05, +p<.10, two-sided test