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ABSTRACT

Comparing Labor Supply Elasticities in Europe and the US: New Results*

We suggest the first large-scale international comparison of labor supply elasticities for 17 European countries and the US, separately by gender and marital status. Measurement differences are netted out by using a harmonized empirical approach and comparable data sources. We find that own-wage elasticities are relatively small and much more uniform across countries than previously thought. Differences exist nonetheless and are found not to arise from different tax-benefit systems or demographic compositions across countries. Thus, we cannot reject that countries have genuinely different preferences. Three other results, important for welfare analysis, are consistent over all countries: the extensive (participation) margin dominates the intensive (hours) margin; for singles, this leads to larger labor supply responses in low-income groups; income elasticities are extremely small everywhere. Finally, the results for cross-wage elasticities in couples are opposed between regions, consistent with complementarity in spouses' leisure in the US versus substitution in spouses' household production in Europe.

JEL Classification: C25, C52, H31, J22

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1 Introduction

The study of labor supply behavior continues to play an important role in policy analysis and economic research. In particular, the size and the distribution of work hour and participation elasticities are key information when evaluating tax-benefit policy reforms and their effect on tax revenue, employment and redistribution.[1] Several excellent surveys exist that report evidence on elasticities for different countries and different periods.[2] Yet, the literature reaches a consensus only on certain aspects, establishing that own-wage elasticities are largest for married women and are small or sometimes negative for men. In terms of magnitude, the variation in labor supply elasticities found in the literature is large, and there is little agreement among economists on the elasticity size that should be used in economic policy analyses (Fuchs et al., 1998).[3] Admittedly, much of the variation across studies is due to different methodological choices, including the type of data used (tax register data or interview-based surveys), selection (e.g., households with or without children) and the period of observation (for instance, Heim, 2007 shows that elasticities have dramatically decreased over time in the US). Maybe the most important source of variation is the type of estimation method. For instance, estimates for the US have been obtained using natural experiments (e.g., Eissa and Hoynes, 2004), long-term wage variations and grouped data (e.g., Devereux, 2003, 2004), continuous labor supply models (e.g., MaCurdy et al., 1990) or discrete choice structural models (e.g., Hoynes, 1996). In addition, results can be sensitive to modeling choices within each approach, for instance the choice of control groups in difference-in-difference estimations or model specification in the structural approach.

Beyond these differences in empirical methods, the following question remains: do genuine differences exist between countries, which could be explained by different demographic compositions, tax-benefit systems, labor market conditions and cultural backgrounds? Consistent findings across a large number of countries could make some of the policy recommendations more broadly viable. Inversely, contrasted results may explain different policy choices, for instance different degrees of redistribution between Western welfare systems. The implicit cost of redistribution between European systems has received renewed attention recently (Immervoll et al., 2007), but information on actual international differences in

[1] We focus our analysis on labor supply responses in a static framework (what Chetty et al., 2011, refer to as steady-state elasticities). We nonetheless discuss the links with the recent literature on the elasticity of taxable income, life-cycle models and the macroeconomic literature in section 2.

[2] Those written in the 1980s mainly focus on estimations using the continuous labor supply model of Hausman (1981) and provide evidence essentially for individuals in couples (Hausman, 1985, Pencavel, 1986, for married men, Killingsworth and Heckman, 1986, for married women). More recent surveys incorporate other methods (see Blundell and MaCurdy, 1999) including life-cycle models (see Meghir and Phillips, 2008, and Keane, 2011).

[3] For instance, Blundell and MaCurdy (1999) report uncompensated wage elasticities ranging from -0.01 to 2.03 for married women. Evers et al. (2008) show that evidence is scattered and that huge variation exists in elasticity estimates.

labor supply behavior was lacking. Another related question is whether participation decisions (the extensive margin) systematically prevail over responses in terms of work hours (the intensive margin). This issue gives rise to the debate about whether welfare programs should be directed to the workless poor, through traditional demogrant policies, or to the working poor via in-work support (Saez, 2001, Blundell et al., 2008). Large participation responses may subsequently lead to large elasticities in the lower part of the income distribution, which is crucial for welfare analysis (see Eissa et al., 2008). Finally, the optimal taxation of couples, and notably the issue of joint versus individual taxation, critically rely on the knowledge of cross-wage elasticities of spouses (Immervoll et al., 2011). Empirical evidence on labor supply responsiveness from an international perspective is virtually absent from the literature.

The present paper attempts to fill this gap. We provide the first set of comparable labor supply elasticity estimates for 17 European countries and the US. For this purpose, we suggest a harmonized approach that nets out possible measurement differences arising from data, periods and methods. We benefit from a unique set of data with comparable variable definitions, and we estimate, separately for each country, the same structural labor supply model. The use of a discrete choice model allows us to account for the actual country-specific tax-benefit policies that affect household budgets. Our estimations are conducted on 25 representative micro-datasets covering 18 countries and two years of data for 7 countries. Datasets cover a relatively short time period (1998-2005), which facilitates cross-country comparison. We provide detailed estimates of own-wage elasticities for single individuals and individuals in couples, cross-wage elasticities for couples, and income elasticities for all groups. We analyze the distribution of elasticities across income groups and decompose labor supply responses between intensive and extensive margins. We also provide extensive robustness checks. Admittedly, using a flexible random utility model makes our results immune to the risk of a systematic bias due to restrictive assumptions on household preferences. Nonetheless, we check whether elasticities vary with the functional form of the utility function, with the way we introduce additional flexibility (fixed costs or mass points on certain part-time options) or with the hour choice set (from a basic 4-choice model to a much finer discretization closer to a continuous model). The complete analysis is based on 9 different specifications, 3 demographic groups and 25 different countries×periods, hence a total of 675 maximum likelihood (ML) estimations. Finally, we discuss the identification strategy used in structural models extensively, and we exploit additional sources of exogeneous variation: For 7 countries, we use two years of data around a period in which significant policy reforms took place.

The paper is organized as follows. In Section 2, we briefly review the existing methods and the available evidence regarding elasticities in Europe and the US. In Section 3, we describe the empirical approach. The main results, reported and discussed in Section 4, go as follows: Own-wage elasticities, both compensated and uncompensated, are found to be relatively small and much tighter across countries than results in the literature suggest.

In particular, estimates for married women lie in a narrow range between .2 and .6, with significantly larger elasticities obtained for countries in which female participation is lower (Greece, Spain, Ireland). Elasticities for married men, expectedly smaller, are even more concentrated. Elasticities for single individuals show substantial variation with income levels. Consistent results are also found across countries, with important implications for welfare and optimal tax analysis: the extensive margin systematically dominates the intensive margin; for single individuals, this result contributes to larger elasticities in low income groups in most countries; income elasticities are extremely small, almost everywhere. In addition, interesting differences also emerge, notably opposing cross-wage elasticities in couples between Western Europe (consistent with substitution in spouses' household production) and the US (consistent with complementarity in spouses' leisure). Results are extremely robust to modeling assumptions and specification tests. In Section 5, a decomposition analysis shows that tax-benefit systems or demographic compositions explain little of the international variation. Thus we cannot reject that countries have genuinely different preferences. Section 6 concludes and derives important implications for research on tax policy.

2 Methods and Existing Evidence

The principal object of examination in this study is the size of wage and income elasticities, which are standard representations of labor supply responsiveness. These are particularly convenient when conducting international comparisons. We first suggest a brief methodological discussion to explain our empirical strategy, then briefly review existing evidence.

2.1 Empirical Approaches

In methodological terms, the ideal situation would be to use a generally agreed-upon standard estimation approach that allows consistent comparisons across countries. We argue here that a reasonable option, and possibly the only option, is to rely on a common structural, discrete choice model that allows predicting elasticities in a consistently comparable way across nations.

There are several options to set up a static structural model of labor supply. The 1980s generation of models, essentially the Hausman (1981) approach, relied on cross-sectional regressions of hours of work on the after-tax wage and virtual income, with instruments for the wage and nonlabor income terms as found in standard Mincer wage equations. Relying on tangency conditions, the Hausman model was mainly restricted to the case of piecewise linear and convex budget sets, i.e., a partial representation of the effect of tax-benefit policies on household budget constraints. By globally imposing Slutsky conditions for internal consistency of the model, this approach was also accused of providing biased estimates (MaCurdy et al., 1990). Instead of estimating a labor supply function, the discrete choice approach is based on the concept of random utility maximization (see van Soest, 1995, or Hoynes, 1996, among others). Thus, it requires the explicit parameterization of consumption-leisure preferences, for utility to be evaluated at each discrete alternative. Tangency conditions need not be imposed and the model is in principle very general.[4] Labor supply decisions are reduced to choosing among a discrete set of possibilities, e.g., inactivity, part-time and full-time. This solves several problems encountered with the Hausman method: discrete choice modeling includes non-participation as one of the options so that both extensive and intensive margins are directly estimated; the complete effect of the tax-benefit system is easily accounted for, even in the presence of nonconvexities in budget sets; work costs, which also create nonconvexities, and joint decisions in couples are dealt with in a relatively straightforward way.

A key issue is the identification of behavioral parameters. In the Hausman approach, the validity of the instrumental variable estimator hinges on whether the exclusion assumptions of the economic model hold. Also, estimates are potentially contaminated by measurement errors (the division bias, cf. Ziliak and Kniesner, 1999) and by assuming wage exogeneity. That is, unobserved characteristics (e.g., being a hard-working person) influence both wages and work preferences so that estimates obtained from cross-sectional wage variation across individuals are potentially biased. A second approach consists in using policy reforms to directly identify responses to exogenous variation in net wages (cf. Eissa and Hoynes, 2004, among others). Natural experiments probably offer one of the most credible sources of identification. However, it is unlikely that we can find significant policy reforms for a large number of countries and all occurring around the same time period. An ideal situation would be even more demanding, that is, a common reform for all countries that would allow us to estimate labor supply responses in a comparable way.[5] A last possibility is to follow studies which rely on long-term changes in wages, and on observation grouping, in order to address endogeneity (Blundell et al., 1998, Devereux, 2003, 2004). For our purpose, this strategy would require using panel data or many repeated cross sections for a large number of countries, which is a daunting task. We discuss this possibility in the concluding section.

[4] In practice, specific utility functions are used. In Section 4.3, we check whether the degree of flexibility or moving closer to the continuous case affect the estimated elasticities (see also Heim, 2009, for a model combining continuous and discrete dimensions).

[5] As noted by Imbens (2010), there are many important research question for which no experimental or quasi-experimental set-up is available, and our large-scale comparison is one of them. Note also that natural experiments pose a few other difficulties. The fact that actual reforms – notably welfare reforms in the US and the UK – typically affect couples or single women with children makes that very little evidence is available for other demographic groups. Moreover, the definition of control groups is an issue already raised for US estimations of responses to EITC expansions affecting single mothers when childless women are used as control group (see Hotz and Scholz, 2003). This issue is shared with the literature on the elasticity of taxable income, whereby results are sensitive to the type of reforms exploited for identification (Saez et al., 2012). Indeed, control groups definition follows from their income level, so that specific preferences are identified (LATE) and results cannot be extrapolated. For instance, changes in tax rates (tax credits) identify the preferences of high (low) income groups, and may not be generalized to the whole population.

To establish consistent cross-country comparisons, we therefore rely on the discrete choice model of labor supply. The identification in this context is usually obtained thanks to the nonlinearity of the tax-benefit code. Our chance in the present study is to have at our disposal the complete simulation of all direct tax and transfer instruments for the 18 countries so that we can fully exploit all nonlinearities and discontinuities in household budget constraints. In addition, we exploit some geographical variation (e.g., across states in the US) and time variation in tax-benefit policies for some of the countries. We discuss this point in detail below. This approach allows us to estimate behavioral parameters and elasticities for all demographic groups including childless singles and couples; this makes the present study very comprehensive compared to existing studies which typically focus on particular groups.

2.2 Existing Evidence

In Appendix Tables A.1-A.4, we have collected empirical evidence from the literature, focusing on estimates for the EU-15 countries (the 15 members of the EU prior to May 1, 2004) and the US. Results are extensively discussed in Appendix A and summarized here. First, as found in classic surveys like Blundell and MaCurdy (1999), recent studies confirm larger elasticities among married women. Estimates for men are generally smaller, with some exceptions (for instance Ireland and some German studies). Some of the studies for the US and the UK, but not all, point to substantial elasticities for single parents while estimates for childless singles are usually missing. Second, for each demographic group, we observe a very large variance in estimates across all available studies. This is partly due to the use of the Hausman approach in early studies, which overstates elasticities compared to what is found with more recent approaches. This may also be due to looking at different time periods (cf. Heim, 2007, and Blau and Kahn, 2007).[6] Third, international comparisons based on existing evidence are imperfect and incomplete. Clearly, there is not enough common support across studies to conclude about genuine differences in labor supply responsiveness between countries. The only clear pattern in the literature is that elasticities are larger for women in countries where their participation rate is lower (for instance in Ireland and Italy, compared to Nordic countries). Estimates are missing or scarce for several EU countries and, as indicated above, for some demographic groups like childless single individuals. This situation fully justifies the present attempt to estimate labor supply elasticities for a large number of Western countries in a comparable fashion.

[6] In contrast, US estimates stemming from modern approaches – discrete choice models, natural experiments or grouped estimations – and recent data are remarkably close (see Table A.4). This is a reassuring observation concerning the use of discrete choice structural models in the present study. Note that several recent studies have compared the labor supply effect of policy changes (measured by natural experiment approaches) to the effect predicted by discrete choice models. Most studies find good external performances (for instance Hansen and Liu, 2011, Geyer et al. 2012, Thoresen and Vattø, 2012) while others highlight some difficulties (Todd and Wolpin, 2006, Choi, 2011).

2.3 Scope of the Analysis

This paper is easily positioned in the literature. First, such a large-scale characterization of labor supply elasticities is new and made possible thanks to the recent availability of comparable datasets and tax-benefit simulations for many countries. To our knowledge, only Evers et al. (2008) gather evidence for a large set of countries. Their meta estimations control for different dimensions including country fixed effects and methodological differences across studies. There may not be enough variation across existing studies, however, and not enough studies per country, to isolate genuine international differences from other factors. Also, the special issue of the *Journal of Human Resources* published in 1990 has also provided evidence from different countries using variants of the Hausman approach (see Moffitt, 1990, for an overview). However, these studies suffer from the aforementioned limitations, rely on old datasets and, most importantly, bear methodological differences that make their estimates not directly comparable.

In this study, we focus on labor supply decisions (hours and participation). Hence, we ignore the other margins that are captured in the literature on the elasticity of taxable income (see a modern statement in Saez et al., 2012). Arguably, these other margins partly relate to responses not directly pertaining to productive behavior, like tax evasion and tax optimization. In this regard, hours of work still constitute an interesting benchmark. Another margin is work effort that may affect wage rates. In the short run, however, hours and participation are the only variables of adjustment for a large majority of workers. We nonetheless discuss our results in this broader perspective in Section 4.

We also leave aside the macroeconomic literature, in which elasticities are often obtained by calibration of general equilibrium models. These elasticities are much larger than in microeconomic studies (e.g., Prescott, 2004). Several reasons have been suggested for this: the use of representative agents and difficulties around aggregation theory when heterogeneity matters (see Blanchard, 2006), the existence of a social multiplier whereby the utility from not working is increasing in the number of people who do not work (see Alesina et al., 2005), and factors related to the timing and the nature of labor supply adjustments (Chetty et al., 2011).[7] Also, Prescott (2004) and several related studies ignore differences in preference/culture between the US and Europe and among European countries themselves. The present study precisely aims at using micro-data to characterize international differences in elasticities and the likely role of country-specific preferences. In this way, our study is related to the recent attempts to explain labor supply differences across countries (Prescott, 2004, Blanchard, 2006, Alesina et al. 2005, Freeman and Schettkat, 2005, Blundell et al., 2011, among others).

[7] Macro estimates can however be reconciled with micro ones when using life cycle models with human capital accumulation (Keane and Rogerson, 2012).

3 A Common Empirical Approach

3.1 Model and Identification

Model and Specification. We opt for a flexible discrete choice model, as used in well-known contributions for Europe (van Soest, 1995, Blundell et al., 2000) or the US (Hoynes, 1996). We refer to these studies for more technical details and simply present the main aspect of the modeling strategy. In our baseline, we specify consumption-leisure preferences using a quadratic utility function with fixed costs. That is, the deterministic utility of a couple i at each discrete choice $j = 1, ..., J$ can be written as:

$$\begin{aligned} U_{ij} &= \alpha_{ci} C_{ij} + \alpha_{cc} C_{ij}^2 + \alpha_{h_f i} H_{ij}^f + \alpha_{h_m i} H_{ij}^m + \alpha_{h_{ff}} (H_{ij}^f)^2 + \alpha_{h_{mm}} (H_{ij}^m)^2 \\ &\quad + \alpha_{ch_f} C_{ij} H_{ij}^f + \alpha_{ch_m} C_{ij} H_{ij}^m + \alpha_{h_m h_f} H_{ij}^f H_{ij}^m - \eta_j^f \cdot 1(H_{ij}^f > 0) - \eta_j^m \cdot 1(H_{ij}^m > 0) \end{aligned} \tag{1}$$

with household consumption C_{ij} and spouses' work hours H_{ij}^f and H_{ij}^m. The J choices for a couple correspond to all combinations of the spouses' discrete hours (for singles, the model above is simplified to only one hour term H_{ij}, and J is simply the number of discrete hour choices for this person). Coefficients on consumption and work hours are specified as:

$$\begin{aligned} \alpha_{ci} &= \alpha_c^0 + Z_i^c \alpha_c + u_i \\ \alpha_{h_f i} &= \alpha_{h_f}^0 + Z_i^f \alpha_{h_f} \\ \alpha_{h_m i} &= \alpha_{h_m}^0 + Z_i^m \alpha_{h_m}, \end{aligned}$$

i.e. they vary linearly with several taste-shifters Z_i (including polynomial form of age, presence of children or dependent elders and region). The term α_{ci} also incorporates unobserved heterogeneity, in the form of a normally-distributed term u_i, for the model to allow random taste variation and unrestricted substitution patterns between alternatives. The normality assumption is mainly made for convenience, and could in principle be replaced by a more flexible distribution (for instance, a discrete distribution with a finite number of mass points, cf. Hoynes, 1996). The fit of the model is improved by the introduction of fixed costs of work, estimated as model parameters as in Callan et al. (2009) or Blundell et al. (2000). Fixed costs explain the fact that there are very few observations with a small positive number of worked hours. These costs, denoted η_j^k for $k = f, m$, are non-zero for positive hour choices and depend on observed characteristics (e.g., the presence of young children).

As discussed in Section 2, this approach allows us to impose very little constraints on the model. In terms of leisure, there is in fact nothing to impose (see van Soest et al., 2002). This is all the more so as fixed costs are only parametrically identified, i.e., a very flexible utility function could pick up the gap in the distribution at few hours. Also, work may not be a source of disutility, as in textbook models, if staying at home is seen as a depressing activity. That is, fixed costs of work could be negative for some people. Hence we do not attempt to interpret them literally, i.e. as an income deflator, but rather express them in utility metric.[8] The only restriction to our model is the imposition of increasing monotonicity in consumption, which seems a minimum requirement for meaningful interpretation and policy analysis; we also check quasi-concavity of the utility function *a posteriori*. The potential restrictions due to the choice of this functional form are examined in Section 4.3.

For each labor supply choice j, disposable income (equivalent to consumption in the present static framework) is calculated as a function

$$C_{ij} = d(w_i^f H_{ij}^f, w_i^m H_{ij}^m, y_i, X_i) \tag{2}$$

of female and male earnings, non-labor income y_i and household characteristics X_i. The tax-benefit function d is simulated using calculators that we present in the next section. In the discrete choice approach, disposable income needs to be assessed only at certain points of the budget curve. Male and female wage rates w_i^f and w_i^m for each household i are calculated by dividing earnings by standardized work hours, rather than actual hours, in order to reduce the so-called division bias. We estimate a standard Heckman-corrected wage equation to predict wages for non-workers. To further reduce the division bias, we predict wages for all observations (and not only for non-workers). The two-stage procedure, whereby wage rates are estimated first then used in the labor supply estimation, is common practice (see Creedy and Kalb, 2005).[9] However, ignoring the wage prediction errors in a nonlinear labor supply model would lead to inconsistent estimates of the structural parameters. We take these error terms explicitly into account in the labor supply estimations, assuming that they are normally distributed and following van Soest (1995).

The stochastic specification of the labor supply model is completed by i.i.d. error terms ϵ_{ij} for each choice $j = 1, ..., J$. That is, total utility at each alternative is written

$$V_{ij} = U_{ij} + \epsilon_{ij}$$

with U_{ij} defined in expression (1). Error terms are assumed to represent possible observational errors, optimization errors or transitory situations. Under the assumption that they follow an extreme value type I (EV-I) distribution, the (conditional) probability for each

[8]They may also pick up other, non-monetary fixed costs of work or account for international differences in institutional settings which are not explicitly modeled, e.g. differences in childcare support in the form of subsidies or free childcare at school. Note that we refrain from estimating childcare jointly with labor supply. This is done very rarely, even in one-country studies, due to data limitation (notably the availability and market price of childcare, which can vary locally and with individual circumstances).

[9]There are actually few studies adopting simultaneous estimations of wages and labor supply (e.g. van Soest et al., 2002). The reason is that tax-benefit simulations must be run at each iteration of the ML estimation. This is not possible in our case given the fact that EUROMOD is not programmed with an econometric software. Approximations relying on a pre-simulated set of disposable income for a whole range of wage values for each individual would be too time consuming given the large number of countries we are dealing with.

household i of choosing a given alternative j has an explicit analytical solution:

$$P_{ij} = \exp(U_{ij}) / \sum_{k=1}^{J} \exp(U_{ik}). \tag{3}$$

The unconditional probability is obtained by integrating out the two disturbance terms, i.e. preference unobserved heterogeneity and the wage error term, in the likelihood. In practice, this is done by averaging the conditional probability P_{ij} over a large number of draws for these terms, so the parameters can be estimated by simulated maximum likelihood. We proceed with simulated ML but rely on Halton draws of these residuals.[10]

Identification. The model accounts for the comprehensive effect of tax-benefit policies on household budgets. Nonlinearities and discontinuities from tax-benefit rules provide a usual source of identification to models estimated on cross-sectional data (see van Soest, 2005, Blundell et al. 2000). Precisely, individuals with the same gross wage usually receive different net wages. Indeed, as they are characterized by different circumstances X_i (different marital status, age, family compositions, home-ownership status, disability status) or levels of nonlabor income y_i, their effective tax schedules are different, i.e., different actual marginal tax rates or benefit withdrawal rates.[11]

In addition, regional variation in tax-benefit rules produces additional exogenous variation and can be identified in our data and our policy simulations for many countries. For the US, variation across states in income tax and EITC is a well-known source of variation (see Eissa and Hoynes, 2004, or Hoynes, 1996). For EU member states, local variation in housing benefit rules can be identified for some countries in our samples/simulations (for instance variations across "départements" in France or municipalities in Finland). In Estonia, Hungary and Poland, local governments provide different supplements to almost all benefits, including child benefits/allowances and social assistance. Regional variation in benefit rules also exists and is accounted for in our simulation for Germany and Italy. Nordic countries operate national and local income taxation. We account for it in the case of Sweden and Finland (with municipal flat tax rates varying from 16.5 to 21% in Finland and $29-36\%$ in Sweden). In the UK, the council tax varies between England, Scotland, Wales and Northern Ireland. Local taxes on dwelling vary with Belgian regions. Regional variations in church tax rates are significant in Finland and Germany. Social insurance contributions can vary by region (e.g., in Germany).[12]

[10] Halton sequences generate quasi random draws that provide a more systematic coverage of the domain of integration than independent random draws. Train (2003) explains that in the context of mixed logit models, the accuracy can be markedly increased. Following Train, we use $r = 100$ draws from Halton sequences.

[11] Arguably, some of these characteristics are included in Z_i and also affect preferences, so the model is only parametrically identified. In practice, tax-benefit rules depend on characteristics X_i which are much more detailed than usual taste-shifters Z_i. Indeed, benefit rules depend for instance on the detailed age of all children in the household, on more detailed geographical information, etc.

[12] Detailed information on regions is however missing for Spain, Denmark, Austria and Portugal (coun-

Finally, for seven countries, we can avail of two years of data. The three-year interval between the two corresponding tax-benefit systems, 1998 and 2001, covers a period of time where significant tax-benefit reforms have taken place. We discuss and explore this additional source of exogenous variation in Section 4.3.

Elasticities. In the present nonlinear model, labor supply elasticities cannot be derived analytically but can be calculated by numerical simulations using the estimated model. For wage (income) elasticities, we simply predict the change in average work hours and in participation rates following a marginal uniform increase in wage rates (non-labor income). We have checked that results are similar when wage elasticities are calculated by simulating either a 1% or a 10% increase in gross wages (unearned incomes). For income elasticities, we give a marginal amount of capital income to households with zero capital income in order to include them in the calculation. For couples, cross-wage elasticities are obtained by simulating changes in female (male) hours when male (female) wage rates are increased. Standard errors are obtained by repeated random draws of the model parameters from their estimated distributions and by recalculating elasticities for each draw.

3.2 Data, Selection and Tax-Benefit Simulations

Data and Selection. We focus on the US, the EU-15 member states (except Luxembourg) and three new member states (NMS), namely Estonia, Hungary and Poland. For each country, we draw from standard household surveys the information about incomes and demographics that can be used for detailed tax-benefit simulations and labor supply estimations (data sources are specified in Appendix Table B.1). For the EU-15, the datasets have been assembled within the framework of the EUROMOD project (see Sutherland, 2007) and combined with tax-benefit simulations for years 1998, 2001 or both. For the NMS, data were collected for the year 2005, and policies simulated for that year, in a more recent development of the EUROMOD project.[13] For the US, we use the 2006 (Integrated Public Use Microdata Series, IPUMS) Current Population Survey (CPS), which contains information for the year 2005. Within the EUROMOD project, datasets have been harmonized in the sense that similar income concepts are used together with comparable variable definitions (e.g., for education). We explain this in more detail in Appendix B and, for the wage estimation, in Appendix C. For each country, we extract three samples (couples, single men and women) for the purpose of labor supply estimations. We only keep households where

tries for which we use the ECHP data) and the Netherlands. Note that for the EU, information on tax-benefit rules for each country is available at: www.iser.essex.ac.uk/research/euromod (together with modeling choices and validation of EUROMOD). For the US, tax-benefit rules and TAXSIM are presented in detail at www.nber.org/~taxsim/.

[13] We make use of policy/data years available in EUROMOD at the time of writing (1998, 2001 or 2005, as indicated above). Future developments of the EUROMOD project should allow extending our results to more the recent period and to more countries.

adults are aged between 18 and 59, available for the labor market (not disabled, retired or in education) and we exclude self-employed, farmers and "extreme" situations, including very large families and those who report implausibly high levels of working hours.

Tax-benefit Simulations. For each discrete choice j and each household i, disposable income C_{ij} is obtained by aggregating all sources of household income and calculating benefits received and taxes and social contributions paid. We cover all direct taxes (labor and capital income taxes), social security contributions, family and social transfers. These tax-benefit calculations, represented by function $d()$ in expression (2), are performed using tax-benefit simulators together with information on income and socio-demographics X_i (for instance the children composition affecting benefit payments), as previously indicated. For Europe we use EUROMOD, a calculator designed to simulate the redistributive systems of the EU-15 countries and of some of the NMS. An introduction to EUROMOD, a descriptive analysis of taxes and transfers in the EU and robustness checks are provided by Sutherland (2007). EUROMOD has been used in several empirical studies, notably in the comparison of European welfare regimes by Immervoll et al. (2007, 2011). For the US, calculations of direct taxes, contributions and tax credits (EITC) are conducted using TAXSIM (version v9), the NBER calculator presented in Feenberg and Coutts (1993), augmented by simulations of social transfers (TANF, Food Stamp). Tax-benefit simulations for the US are used in combination with CPS data in several applications (e.g, Eissa et al., 2008). We assume full benefit take-up and tax compliance. More refined estimations accounting for the stigma of welfare program participation would require precise data information on actual receipt of benefits, which is not always available or reliable in interview-based surveys (see Blundell et al., 2000).

Statistics. Descriptive statistics of the selected samples are presented in Appendix Table B.1. For married women, mean worked hours show considerable variation across countries. This is essentially due to lower labor market participation in Southern countries (with the noticeable exception of Portugal), Ireland and, to a lesser extent, Austria and Poland. The correlation between mean hours and participation rates is .92. There is nonetheless some variation in work hours among participants, with shorter work duration in Austria, Germany, Ireland, the Netherlands and the UK. The participation of single women is lower in Ireland and the UK due to the larger frequency of single mothers (we can see that the average number of children among single women is the highest in these two countries and Poland). There is much less variation for men, the main notable fact being a lower participation rate for single compared to married men. The variation in wage rates and demographic composition across countries is also noteworthy. In particular for married women, participation rates are correlated with wage rates ($corr = .36$) and the number of children ($-.61$). Attached to these patterns, there may be interesting differences across countries in the responsiveness of labor supply to wages and income. We turn to this central issue in the next sections. In Appendix Table B.2, we take a closer look at the distribution of actual worked hours.

For men, this shows the strong concentration of work hours around full time ($35-44$ hours per week) and non-participation. There is more variation for women, in particular with the availability of part-time work in some countries: a peak at 15-24 hours can be seen in Belgium or at 25-34 hours in France where some firms offer a 3/4 of a full-time contract; the Netherlands shows high concentration in these two segments. The US is characterized by a particularly concentrated distribution, around full-time and inactivity, and a relatively high rate of overtime. To accommodate the particular hour distribution of each country, while maintaining a comparable framework, we suggest a baseline estimation using a 7-point discretization, i.e., $J = 7$ for singles and $J = 7 \times 7$ for couples, with choices from 0 to 60 hours/week (steps of 10 hours). We check below the sensitivity of our results to alternative choice sets, notably to using a narrower discretization.

4 Results

This section presents and discusses a large set of results. Notice that we cannot really compare preferences across countries directly, given the large number of model parameters. While a simpler model, for instance a LES specification, would allow us to do so, it would be certainly too restrictive. Hence, we directly focus on the comparison of labor supply elasticities. Estimates, log-likelihood and pseudo R2 are reported and discussed in Appendix D, separately for couples, single women and single men (Tables D.1-D.8). An extensive analysis of how the model fits the data in the various countries is also suggested in Appendix E. The overall conclusion is that the model performs relatively well, which provides reassurance regarding the reliability of our elasticity measures. Further robustness checks are carried out in Section 4.3.

Our results concerning labor supply elasticities are illustrated in graphs below and reported in full detail in Appendix Tables F.1-F.4 for couples and F.5-F.8 for single women and men. These tables contain own-wage hour elasticities, compensated and uncompensated, overall and for quintiles of disposable income. We distinguish the hour elasticity for the sub-group of participants (pure intensive margin) and the participation elasticity (extensive margin). The extensive margin is expressed in percentage change of the employment probability ("particip."). Alternatively, it is expressed in hour changes corresponding to participation responses ("hour"), so this measure and the intensive margin sum up to the total uncompensated hour elasticity. We finally show cross-wage hour elasticities for individuals in couples and income elasticities. Bootstrapped standard errors are also reported for the main elasticity results.[14] We first comment on the size of own-wage elasticities as reported

[14] When two years of data are available, we have reported elasticities based on separate estimations for each year. Estimates of the utility function parameters, as reported in Appendix Tables D.1-D.8, show relatively similar results for the two years, which is reassuring about the fact that preferences do not change substantially over the three-year interval. In Section 4.3, we check the sensitivity of our results when imposing the stability of preferences and using time variation in fiscal rules as an additional source of exogenous

in Figure 1.[15]

4.1 The Size of Own-Wage Elasticities

Results for Married Individuals. We first focus on *married women*, the group mostly studied in the literature. Total hour elasticities are to be found in a very narrow range $.2 - .4$ for several countries (Austria, Belgium, Denmark, Germany, Italy and the Netherlands). They are slightly smaller, around $.1 - .2$, but significantly different from zero in France (for 2001), Finland, Portugal, Sweden, the NMS, the UK and the US. They are significantly larger, between .4 and .6, in Ireland, Greece and Spain. Thus, our results show that elasticities are relatively modest and hold in a narrow interval, once comparable datasets, selection and empirical strategies are used. However, estimates are sufficiently precise so that differences between the three groups of countries mentioned above are statistically significant. Over all countries and periods, the mean hour elasticity is .27 with a standard deviation of .16. The simple intuition that elasticities are larger when female participation is lower is broadly confirmed by the data, i.e., the cross-country correlation between mean wage hour (participation) elasticities and mean worked hours (participation rates) is around -0.81 (-0.84). In Tables F.1-F.2, we show that elasticities are only slightly larger for women with children. They are significantly larger in a few countries and notably in the high-elasticity group (Greece, Ireland and Spain).[16] For *married men*, results are even more compressed, with own-wage elasticities usually ranging between around .05 and .15 (see Figure 1). Over all countries/periods, the mean hour elasticity is .10 with a standard deviation of .05. Estimates are precise enough to find statistical differences across some countries, yet less pronounced than for women. The correlation between elasticities and worked hours (participation) is around -0.41 (-0.64). Compared to some of the older literature, we find total hour elasticities which are significantly larger than zero. However, as discussed in Section 4.2, pure intensive margin elasticities are very close to zero and even negative in some cases.

Comparison with Past Results for Couples. The survey in Appendix A (Tables A.1-A.2) conveys the idea that elasticities were larger when estimated on older data and/or using the Hausman approach. We confirm here that elasticities are in fact much smaller and

variation.

[15] We focus on uncompensated elasticities. Compensated own-wage elasticities, as reported in Appendix Tables F.1-F.8, are only slightly larger than uncompensated ones in most cases because of very small and negative income elasticities, as discussed below. They are slightly smaller in rare cases where income elasticities are positive, e.g., single women in Denmark.

[16] Appendix Table B.1 shows that the number of couples with children is large in Ireland but close to average in Greece and Spain. Hence, higher elasticities among married women in these countries do not seem to be driven by a higher proportion of families with children. This is confirmed by the decomposition analysis in Section 5.3.

more comparable when using data for the 1990s/2000s and a relatively flexible labor supply model. We now suggest a more refined comparison with previous studies. Concerning *married women*, our estimates are very close to, or not statistically different from, past findings for Austria, Belgium, Finland, Germany, Sweden and the UK. For instance for Germany, most studies report own-wage elasticities of around .3 for married women (with relatively broad confidence intervals), which is similar to our result for the years 1998 and 2001. Our estimates are however smaller or close to the lower bound of past confidence intervals for Ireland, Italy and the Netherlands, which is partly explained by the use of older data in previous studies (e.g., in papers by van Soest and coauthors). For France, elasticities for married women are smaller than in other studies, which can be attributed to selection (Choné et al. focus on families with children) or different methods. Our estimates for the US are very small and compare well to the most recent results (Heim, 2009). US studies which report larger elasticities rely on older data, while it has been shown that elasticities have dramatically decreased over time in this country (Heim, 2007). For other countries, evidence based on discrete choice models is not directly comparable to our results or simply absent. Our estimates for *married men* compare well to previous results in countries where significant evidence exist (Belgium, Germany, Ireland, Italy, the Netherlands, Sweden and the US), but comparison points for other countries are generally missing.

Results for Single Individuals. Despite the large increase in the number of childless single individuals over the last few decades, the labor supply behavior of single women and men has received relatively little attention. This is especially true when compared to the vast literature on the labor supply of married women and single mothers (cf. Blundell and MaCurdy, 1999). The main reason is probably the fact that most of the policy reforms used to estimate labor supply responses in the US and the UK concerned families with children. In this way, the present study adds valuable information to the literature by providing new estimates for single individuals and for many countries. As can be seen in Figure 1, elasticities for *single men* show a little more variation than for married men, usually in a range between 0 and .4 with a few exceptions. They are significantly different from zero in most cases with some exceptions including Italy and Portugal. Estimates are slightly larger than for married men overall, which is in line with lower participation rates and lower attachment to the labor market among young single individuals. This is particularly the case in Spain and Ireland, where estimates are significantly larger than in other countries. We also observe some variation among *single women*, usually between .1 and .5 with larger elasticities for some countries (around $.6 - .7$ in Belgium and Italy). Single mothers tend to have larger elasticities than childless women, yet differences are usually not significant (notable exceptions are Greece and Ireland). The correlation between elasticities and worked hours (participation) among single individuals is usually smaller than for couples: $-.50$ ($-.50$) for women and $-.32$ for men ($-.46$).

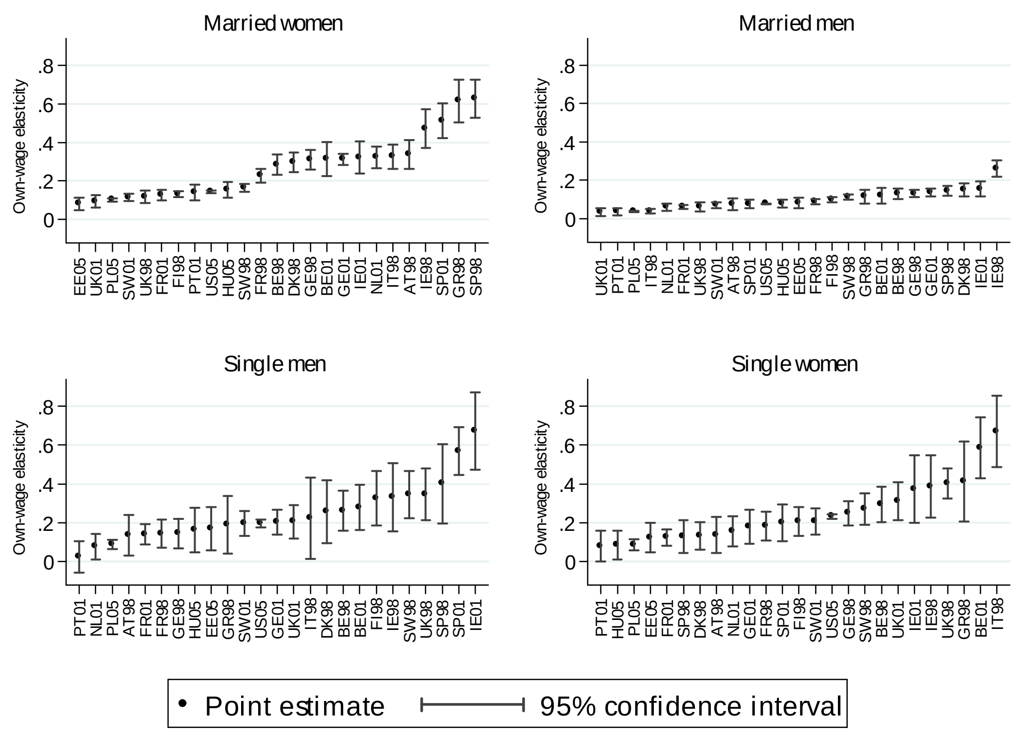

Figure 1: Own-wage Elasticities: Total Hours

Comparison with Past Results for Singles. The number of existing studies on single individuals is very limited, as noted above (see Tables A.3 and A.4 in the Appendix). For the Netherlands, Euwals and Van Soest (1999) report wage elasticities for childless single individuals of around $.10 - .11$, which is in line with our results. For Germany, a series of studies report estimates between .10 and .36 for all childless singles, a range that contains our point estimates for single men and women. We report larger estimates than Aaberge et al. (2002) concerning Italy, however. For single mothers, more numerous studies exist, in particular for the UK and the US (see Tables A.3 and A.4). Several studies report comparable estimates to ours for the UK (Blundell et al., 1992) and the US (Dickert et al., 1995). Our results however point to more moderate elasticities than in Keane and Moffitt (1998) for the US or for several British studies. This is possibly due to the fact that we cover a more recent time period, which implies methodological differences and the fact that this group has become relatively larger over time (and, hence, less negatively selected in terms of labor market participation). Indeed, Bishop et al. (2009) study all single women over a long period (1979-2003), using a simple estimation of hours and participation on repeated cross-sections. Their study also reports small elasticities (at least compared to typical estimates for married women) and, more specifically, a significant decline in hours wage elasticities over the period.

4.2 International Comparisons

We have established that international differences in the magnitude of wage elasticities are modest once comparable datasets, selection and a common empirical approach are used. This is an interesting result given the substantial differences that exist across countries in terms of labor market conditions, institutions and preferences/culture. We have nonetheless found significant differences between broad groups of countries, as discussed above, which we investigate more thoroughly in Section 5. We now focus on interesting regularities as well as on salient differences between countries.

Extensive versus Intensive Margins. In Figure 2, we decompose total hour elasticities (i.e. changes in total work hours due to a marginal wage increase) into hour changes among workers (intensive margin) and hour changes due to participation responses (extensive margin). We clearly see that most of the response is driven by the extensive margin. This result is important for tax and welfare analyses, as motivated in the introduction. The literature has documented this fact for a few countries (see Heckman, 1993, and Tables A.1-A.4 in the Appendix). Our results, however, show that this pattern holds almost systematically across many Western countries and for all demographic groups. Even in the rare situations where the intensive margin is non-zero, the extensive margin is larger (e.g. for Dutch married women). For singles, largest participation responses come from low income groups, as we discuss in further detail below.

The intensive elasticities are extremely small for all countries and all demographic groups, for example, lower than .08 for married women in all countries (except the Netherlands). Intensive margin elasticities are sometimes negative for men in couples (e.g., in the UK), single men (e.g., Belgium, Ireland and Portugal) and single women (Denmark). Small responses at the intensive margin are mainly due to the few possibilities of working part-time in most countries. Among exceptions where responses are significant, the extreme case is the Netherlands, with an intensive margin representing half of the response. We conjecture that this is due to the outstanding role of part-time work in this country and the possibility to adjust labor supply along this margin (on average, about 25% of prime-age working women work part-time in the OECD while this is around 50% in the Netherlands; cf. Table B.2 and the discussion in Section 3.2).

Distribution of Own-wage Elasticities by Income Groups. In Appendix Tables F.1-F.8, we provide the distribution of own-wage elasticities of total hours by quintiles of the income distribution (with quintiles defined for couples and singles separately). This information is represented graphically in Figure 3, with a box-plot showing the cross-country dispersion for each quintile. In Figure 4, we show the detailed distribution of elasticities across quintiles, separately for each country. The first striking result is that there is much more variation than when looking only at mean elasticities. For all groups except married

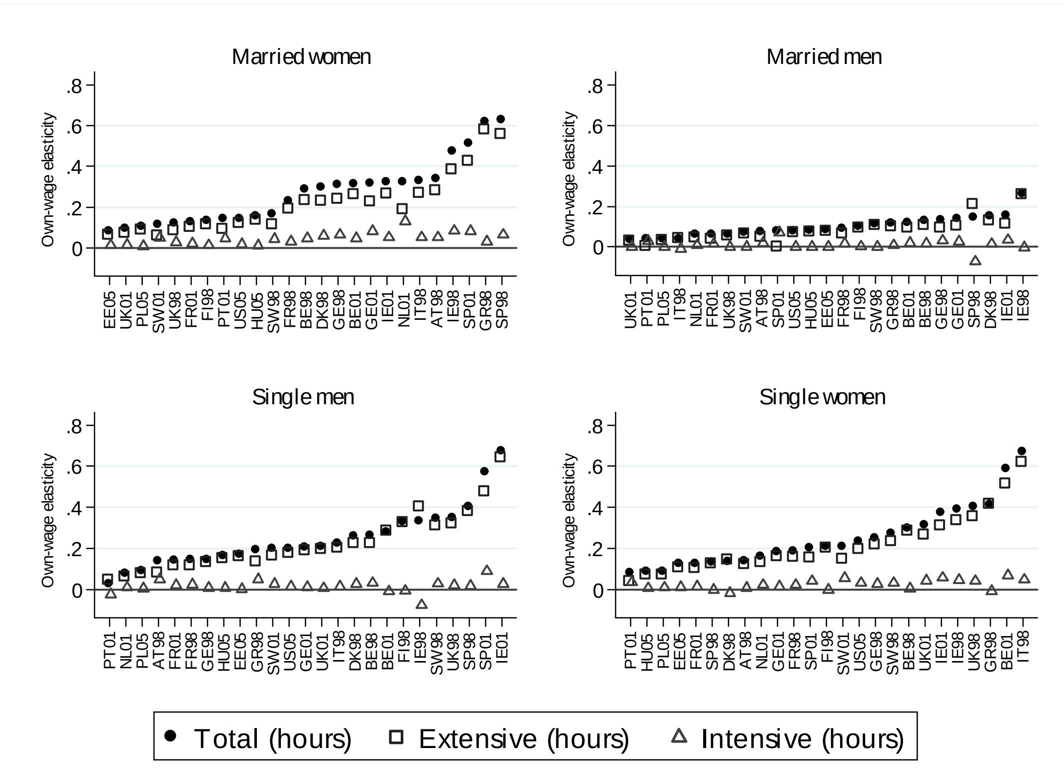

Figure 2: Own-wage Elasticities: Intensive versus Extensive Margins

men, elasticities for some income quintiles can go up to 1.

More precisely for single individuals, the distribution of elasticities across income groups shows a clearly decreasing pattern, with largest elasticities for lower quintiles. The fact that elasticities may be very heterogeneous across different earning groups – and that participation elasticities can be significantly larger at the bottom of the distribution – is crucial for welfare analysis (cf., Eissa et al., 2008, Saez, 2001). Very few studies report this kind of information, however.[17] Our results generalize it and show that for single individuals, participation elasticities indeed drive the large responses in lower quintiles.

Results for married women do not show such a pattern and point in fact to larger elasticities at the top. Eissa (1995) finds similar results for the US. This is consistent with the added worker theory (see Blundell et al., 2012): women in poor households must complete family income while the labor supply of those in wealthier families is sensitive to financial incentives. For married men, our results show a flat or decreasing pattern in total hours, closer to that of singles. There are some exceptions (i.e. an increasing pattern in France, Italy, Spain, the UK). Results are usually not driven by a decreasing intensive margin but, again,

[17] The rare exceptions, Meghir and Phillips (2008) for the UK and Aaberge et al. (2002) for Italy, indicate that low-educated single men significantly respond to financial incentives. The former study reports a participation wage elasticity of .27 for unskilled single men and of zero for those with college education. The latter study reports participation elasticities as high as .5 for single men in the lower part of the income distribution and almost zero higher up.

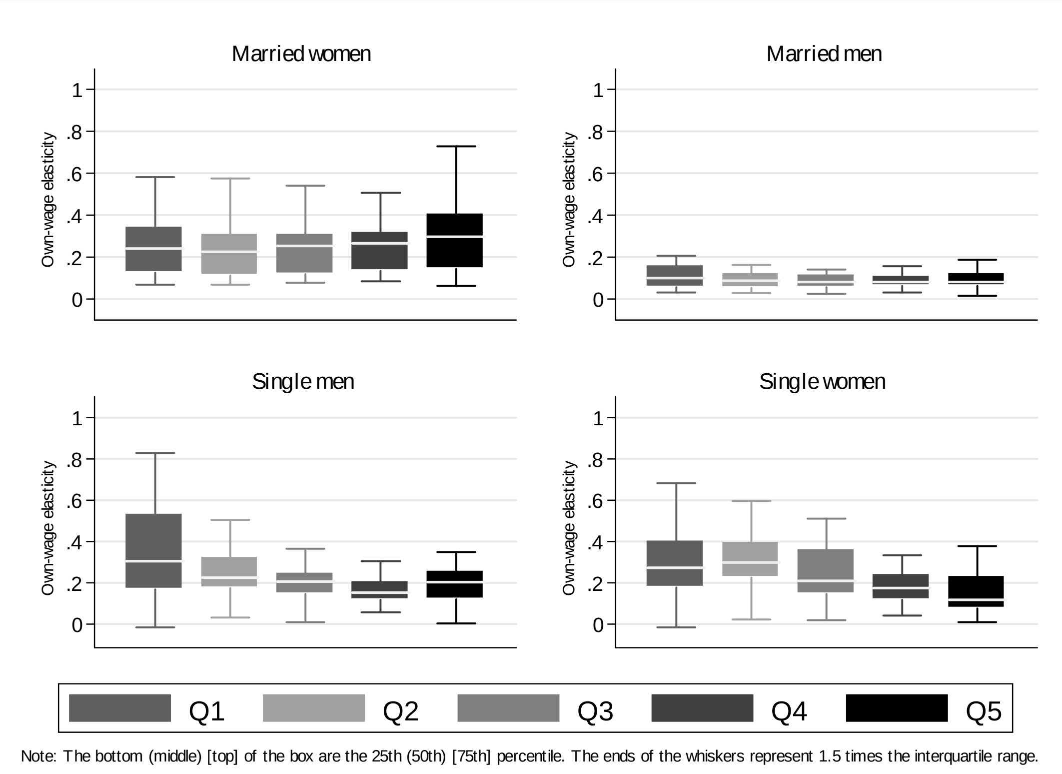

Figure 3: Wage Elasticities by Income Quintile (box plots over all countries)

by the participation margin. In fact, for some countries like the US, elasticities decrease with income along the extensive margin while the intensive margin (the difference between total and extensive effects in Figure 4) seems to increase with income. This is in line with the elasticity of taxable income literature, which reports more responses at the top of the distribution (admittedly due to margins not accounted for here, but also to more adjustment possibilities for top earners). Other countries like the UK show intensive elasticities becoming negative for higher incomes, more in line with backward bending labor supply curves.

Cross-wage Elasticities. Maybe the most interesting difference across countries is the measure of cross-wage elasticities within couples. Estimates of uncompensated elasticities are plotted with confidence intervals in the left hand side graph of Figure 5 and reported in Appendix Tables F.1-F.4. These are usually negative and smaller in absolute value than own-wage elasticities. They are nonetheless sizeable for women in some countries, including Austria, Denmark, Germany and Ireland, which is not an unusual result (see, e.g., Callan et al., 2009). Cross-wage elasticities are much smaller (in absolute terms) for men, between $-.05$ and 0 in most countries. Income effects being small, compensated cross-wage elasticities are close to uncompensated ones. On the right hand side graph of Figure 5, we plot *compensated* elasticities for both men and women in order to easily check the complementarity or substitution between spouses' non-market time. With sufficient complementarity, a decrease in the male (female) wage must decrease both male and female non-market time,

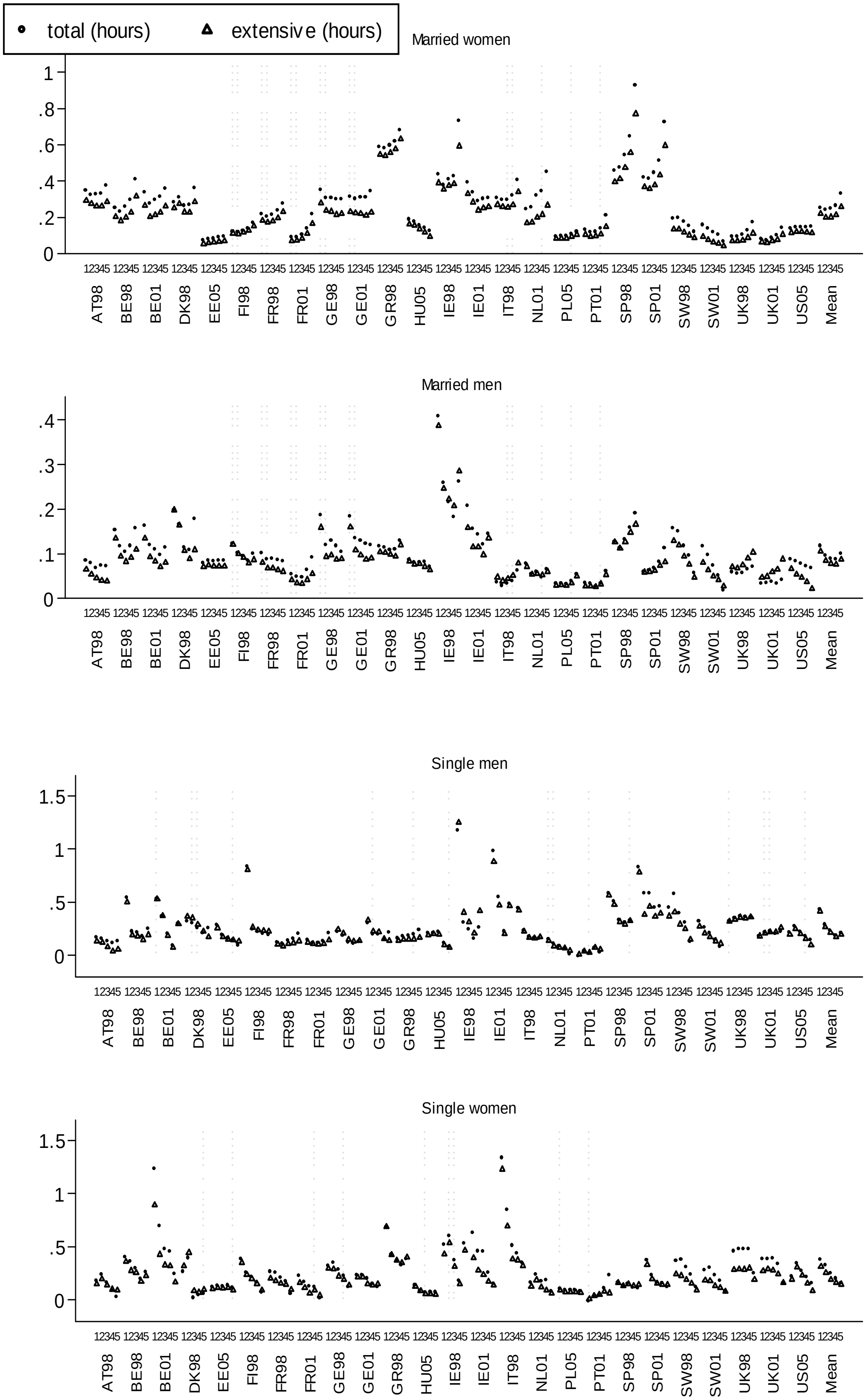

Figure 4: Wage Elasticities by Income Quintile

i.e. cross-wage elasticities are positive. Interestingly, this situation seems to characterize the US (elasticities are small but significant). That spouses enjoy spending time together sounds reasonable, all the more so as free time is relatively more scarse than in Europe and more likely to coincide with pure leisure. An alternative explanation is higher assortative mating on productivity levels (compared to Europe). Recent evidence in an intertemporal framework by Blundell et al. (2012) tend to support the former explanation, however. In contrast, our results point to substituability between male and female non-market time in most European countries. This is consistent with, but not exclusively explained by, the fact that non-market time of European couples is more often associated with household production (see Freeman and Schettkat, 2005), for which male and female non-market time can be seen as substitute. Four countries show an apparently asymmetrical situation. In fact, only the female cross-wage elasticity is positive in Poland and Hungary (male elasticity is not significantly different from zero). For Spain 2001 and Italy, cross-wage elasticities are negative for men and positive for women (a similar result exists for low income groups in Aaberge et al., 2002), but female elasticities are not significantly different from zero.

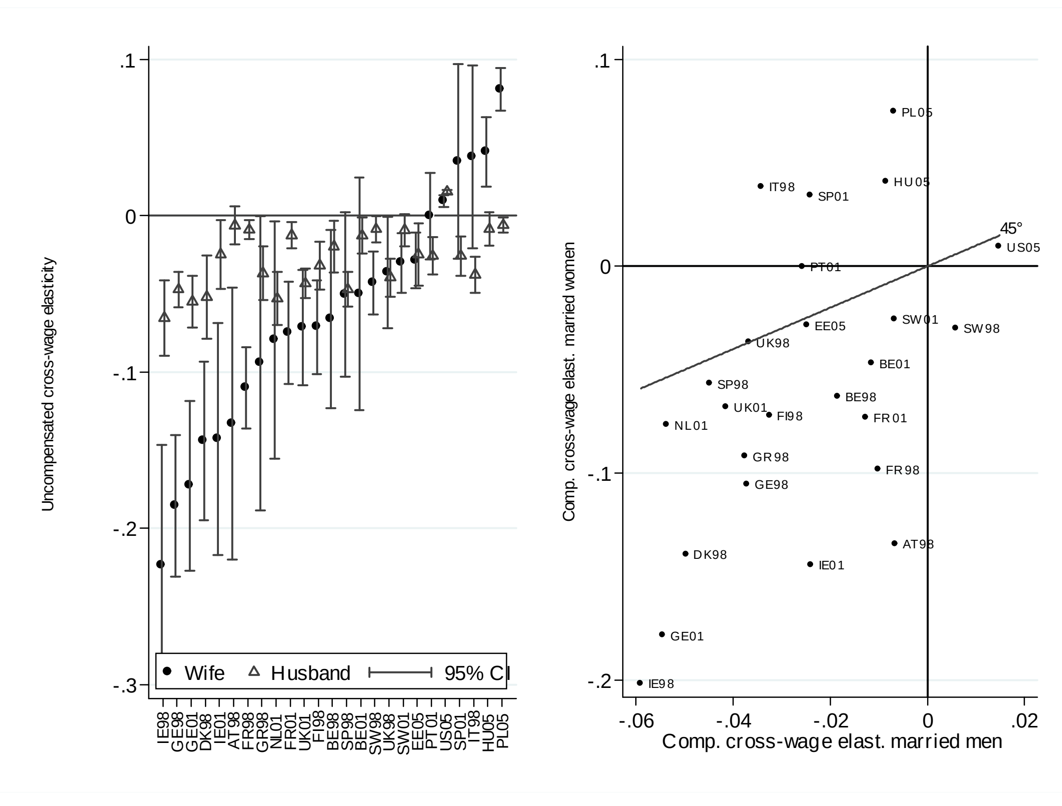

Figure 5: Cross-wage Elasticities

Income Elasticities. Income elasticities are plotted in Figure 6 and reported in Appendix Tables F.1-F.8. As often in the labor supply literature, income elasticities are very close to zero and negative for a majority of countries (cf., Blundell and MaCurdy, 1999; insignificant income effects are also found in the literature on taxable income elasticities, cf., Saez et al., 2012). They are positive for some countries but rarely significant in this case. The main exceptions are Finland and Sweden. Despite being at odds with theory, positive income elasticities are encountered in other papers (including two studies for Finland and Sweden, as discussed in Appendix A, plus van Soest, 1995, for the Netherlands and Blau and Kahn, 2007 for the US, among others).[18] Looking more closely at the estimates, we find that this result is driven by singles without children, located in the lowest income quintiles and responding along the participation margin. The explanation that fits these facts is the following: Nordic countries are characterized by stricter asset-tests for social assistance than other countries (cf. Eardley et al. 1996). Hence, cross-sectional variation may capture the fact that among the least productive singles in Nordic countries, those with nonlabor income are more likely to work as they are not eligible for welfare.

Finally, let us make a few remarks. First, the literature on optimal taxation usually assumes income effects to be zero in order to simplify the derivation of optimal tax rules (see for instance Saez, 2001). Our results tend to support this assumption. Second, one may ask "what is small?". For comparison, own-wage elasticities for women are computed with a 1% wage increment that corresponds, in additional weekly income, to between 2 and 15 times (across countries, on average) the increment in weekly nonlabor income used for income elasticity calculation. Third, for couples, male and female income elasticities are very similar (this is not directly visible from the graphs). Exceptions include Italy, Spain and France. When ignoring Italy, where male income elasticities are very negative, the correlation between married men and women's income elasticities is .79.

4.3 Robustness Checks

We suggest an extensive sensitivity analysis, focusing on married women, i.e. the main group of interest in the literature.

Improving Identification: Policy Reforms. As previously discussed, identification is often improved by pooling several years of data in order to exploit exogenous variation in net wages stemming from policy reforms. For seven countries, we have two years of data at our disposal, 1998 and 2001. The three-year interval coincides with significant reforms in these countries, including tax credit reforms in the UK (1999), France and Belgium (2001); significant changes in income tax schedules in Germany, Spain and Ireland; and several changes in transfers. A very detailed review of these policy changes is suggested in Appendix G. We re-estimate the labor supply model for each country by pooling the two years of data

[18] Substituability between time and money inputs in household production may explain this result. Indeed, an income effect may not only increase leisure (a normal good) but also decrease housework, and could eventually increase labor supply if the latter effect dominates. This story seems to apply less to singles than to married individuals with children, however.

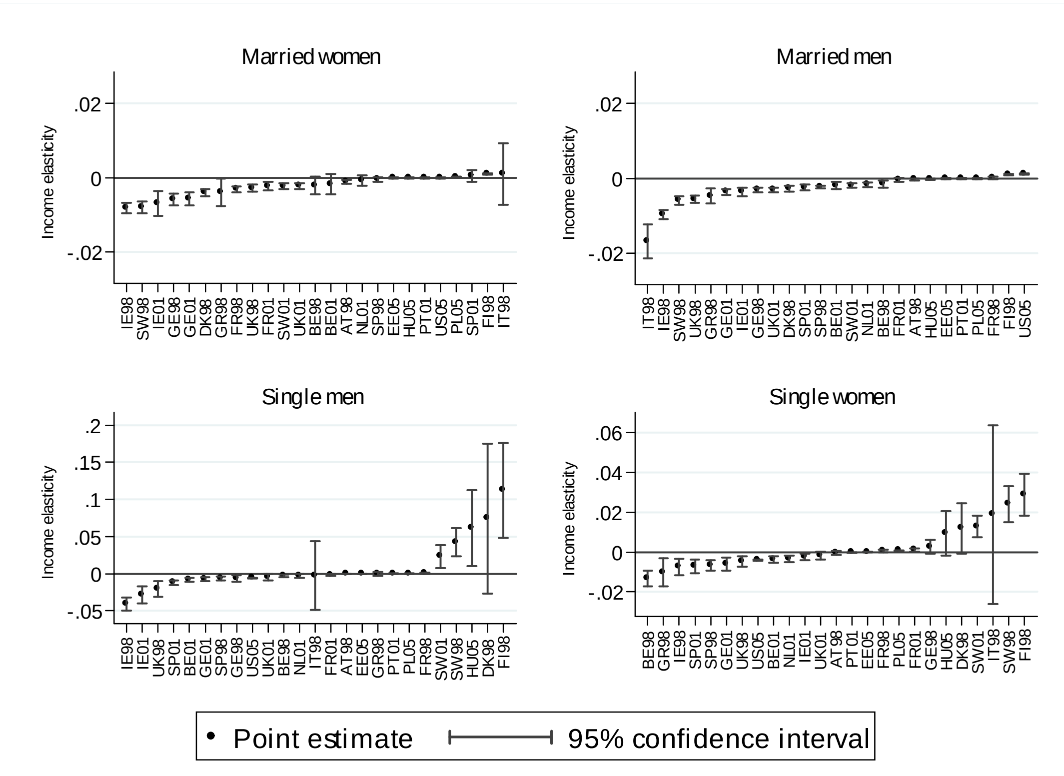

Figure 6: Income Elasticities

and assuming stable preferences over the period. Results are plotted in Figure 7 and reported in Appendix Table G.1. The important point is that the overall picture does not change. For 11 of the 14 country×year observations, results are basically unchanged compared to baseline estimates. For France 1998 and Spain 1998, however, elasticities are now smaller and more similar to that of 2001, confirming that France (Spain) is in the group of countries with low (high) elasticities. For Ireland 2001, the elasticity is now more similar to the 1998 estimate, placing this country in the high-elasticity group.

Specification Check. We have argued that models with discrete choices are very general as they do not require imposing much constraint on preferences and allow accounting for complete tax-benefit policies affecting household budgets. As discussed in Section 2, we may nonetheless check whether our estimates are sensitive to several crucial aspects of the model specification. Results of these extensive robustness checks are provided in Appendix Table G.2. The first row of each panel in this table corresponds to the baseline, that is, a 7-choice model with quadratic utility and fixed costs, whereby elasticities are obtained by averaging expected hours over all observations (frequency method).

Firstly, results are not sensitive to the way we calculate elasticities (i.e., frequency versus calibration methods, see discussion in Appendix G). Secondly, and more importantly, we check whether the main restriction of the model, i.e., the fact that the choice set is discretized,

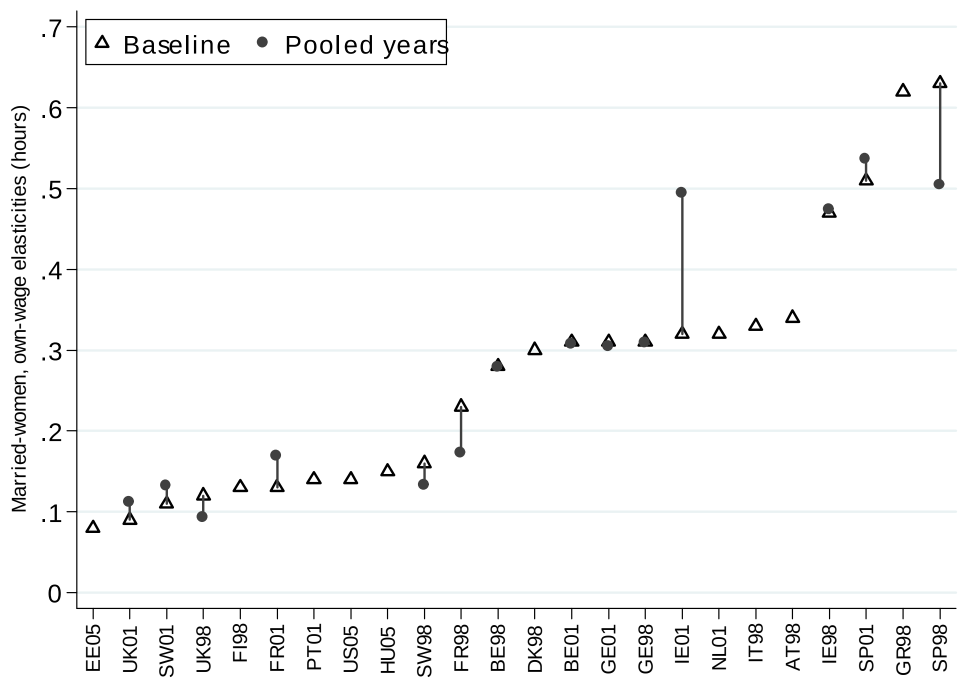

Figure 7: Pooling Years to Improve Identification

plays a role. The fourth and fifth rows of each panel in Table G.2 report elasticities when alternative choice sets are used, namely a discretization with 4− and 13−hour choices. The model with $J = 4$ choices for singles ($4 \times 4 = 16$ for couples) essentially captures the commonly agreed durations of work: non-participation (0), part-time (20), full-time (40) and overtime (50 hours/week). Such a model does not adapt particularly well to the hour distribution of each country. The narrower discretization with 13 choices, from 0 to 60 hours/week with a step of 5 hours, and $13 \times 13 = 169$ combinations for couples, is more computationally demanding. However, it may pick up more country-specific peaks in hour distributions and, in fact, makes it closer to a continuous model. Interestingly, Table G.2 shows that results are very similar in all three cases ($J = 4, 7$ and 13). Only slightly larger elasticities are observed in the 4-point case for some countries (e.g., Belgium and Ireland).

Finally, we check whether elasticities are sensitive to the functional form. Similar to van Soest et al. (2002) for the Netherlands, we experiment alternative specifications by increasing the order of the polynomial in the utility function: quadratic (baseline) then cubic and quartic (rows 6 and 7 of the panels in Table G.2). We also change the way flexibility is gained in the model by replacing fixed costs of work, as used in Blundell et al. (2000), by part-time dummies (last rows in Table G.2). Precisely, we include dummies at the 10, 20 and 30 hour choices in the 7-choice model, as used in van Soest (1995). These parameters may be interpreted as job search costs for less common working hours (van Soest and Das,

2001) and, hence, include some of the labor market restrictions on the choice set.[19] Results for these different specifications are relatively stable: the size of elasticities hardly changes across the different modeling choices.[20] This result reinforces our main conclusions regarding international comparisons.

5 Assessing Cross-Country Differences in Elasticity Size

The evidence presented above suggests that cross-country differences in labor supply elasticities remain, even after controlling for methodological differences. In this section, we attempt to isolate several important factors explaining these differences. We still focus on married women, for the reasons previously invoked and because this group shows the largest variations in elasticities across countries.

5.1 Wage and Labor Supply Levels

Hour and participation elasticities are strongly correlated with mean hours and participation levels across countries. We check here that larger elasticities in countries like Greece, Ireland and Spain are not simply due to the hour and wage levels. Denote $\epsilon_c = \frac{\partial H_c}{\partial w_c}\frac{w_c}{H_c}$ the hour elasticity for country c. We re-compute elasticities as $\epsilon_c^M = \frac{\partial H_c}{\partial w_c}\frac{\overline{w}}{\overline{H}}$, using the country-specific responsiveness $\frac{\partial H_c}{\partial w_c}$ while holding hour and wage at the mean levels $\overline{H}$ and $\overline{w}$ for all countries (adjusted for PPP differences in the case of wages). We focus on own-wage elasticities of total hours and report the results in Figure 8. The upper left panel compares elasticities in the baseline (circles) and in this "mean levels" scenario (triangles) together with their 95% bootstrapped confidence intervals. The two scenarios are plotted one against the other in the upper right panel. We observe little difference when holding wages and hours constant. The only exceptions are Estonia, Hungary and Portugal (the US), which are pushed in the high (low) elasticity group under the mean level scenario. This is clearly due to the fact that the NMS and Portugal (the US) have significant lower (higher) wage rates while their female participation rates are somewhat close to the international average. The lower left (right) panel represents the "mean hour" ("mean wage") scenario where only hours (wages)

[19] The fact that some choices may not be available to some people because of institutional constraints or individual/job characteristics can be modeled explicitly as a probability of choice availability in the log-likelihood (see Aaberge et al., 1995, who also allow for different wage rates at each choice). Such a model is simply a different parameterization of the present model where dummies for specific, possibly constrained hours of work are used (see also van Soest and Das, 2001).

[20] The only exception seems to be Italy where higher order polynomial utility leads to larger elasticities. The difference with the baseline is statistically significant only in the case of participation elasticities, and partly disappears when we restrict the condition of participation to people working at least five hours a week when calculating elasticities (indeed, there are a number of initial non-working women for whom the predicted number of weekly hours is very small after the wage increase used to calculate elasticities – the additional restriction is reasonable if we consider that it is unusual to observe such small values).

are hold at the international mean value $\overline{H}$ ($\overline{w}$). We see that high-elasticity countries like Greece and Spain are not only characterized by lower female labor supply but also by lower wage rates. These two effects cancel each other so that these countries remain in the high-elasticity group under the total mean level scenario. The main message of this exercise is that cross-country differences are preserved when elasticities are evaluated at mean values and must therefore be explained by other factors.

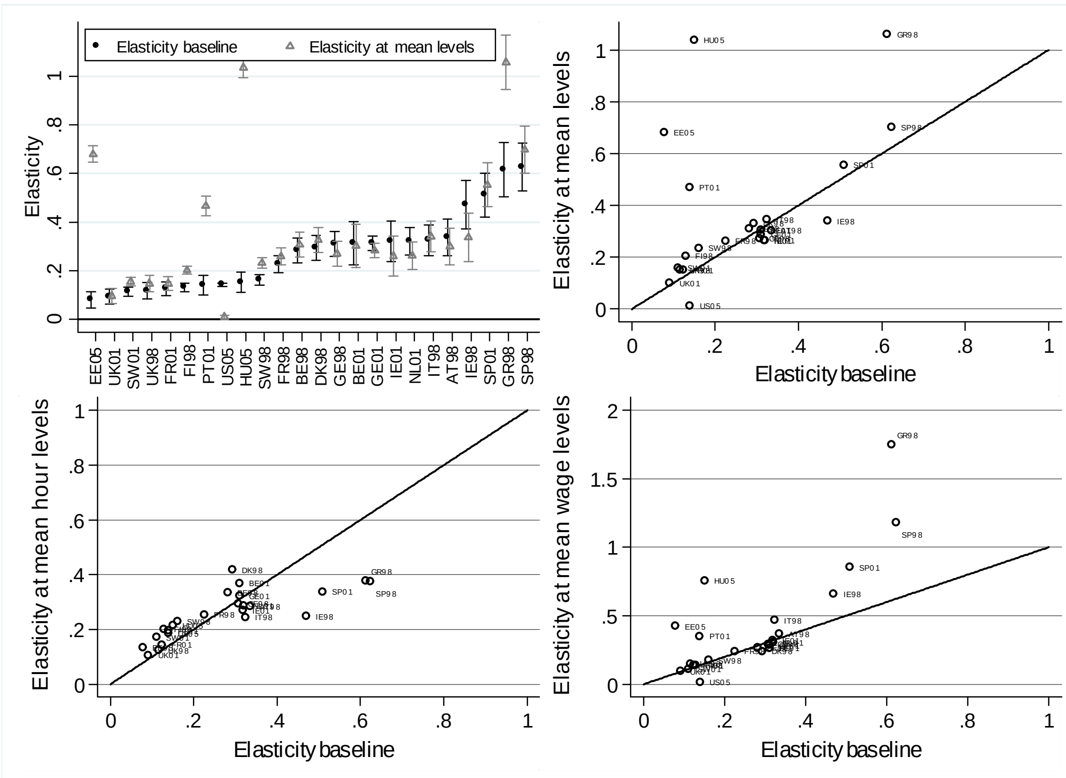

Figure 8: Effect of Wage/Hour Levels on Wage-Elasticities of Total Hours (Married Women)

5.2 Tax-benefit Systems

The size of hour elasticities may be influenced by differences in tax-benefit systems across countries. Precisely, baseline elasticities are calculated by incrementing gross wages by 1%, as it is common in the literature. In this way, the fact that high tax countries are characterized by smaller net wage increments could explain smaller elasticities. To check this point, we simulate a 1% increase in the *net* wage, in order to cancel out differences in effective marginal tax rates (EMTR) across countries due to different tax schedules or benefit withdrawal rates. Figure 9 reports total hour elasticities in the baseline and in this "net-wage increment" scenario. The right panel plots the two situations while the left panel additionally indicates the 95% bootstrapped confidence intervals. In general, elasticities after a 1% increase in net wage are larger – indeed a 1% change in gross wages correspond to smaller increments due to taxation. However, and most importantly, cross-country variation in elasticities is not really affected when accounting for differences in implicit taxation of labor income.

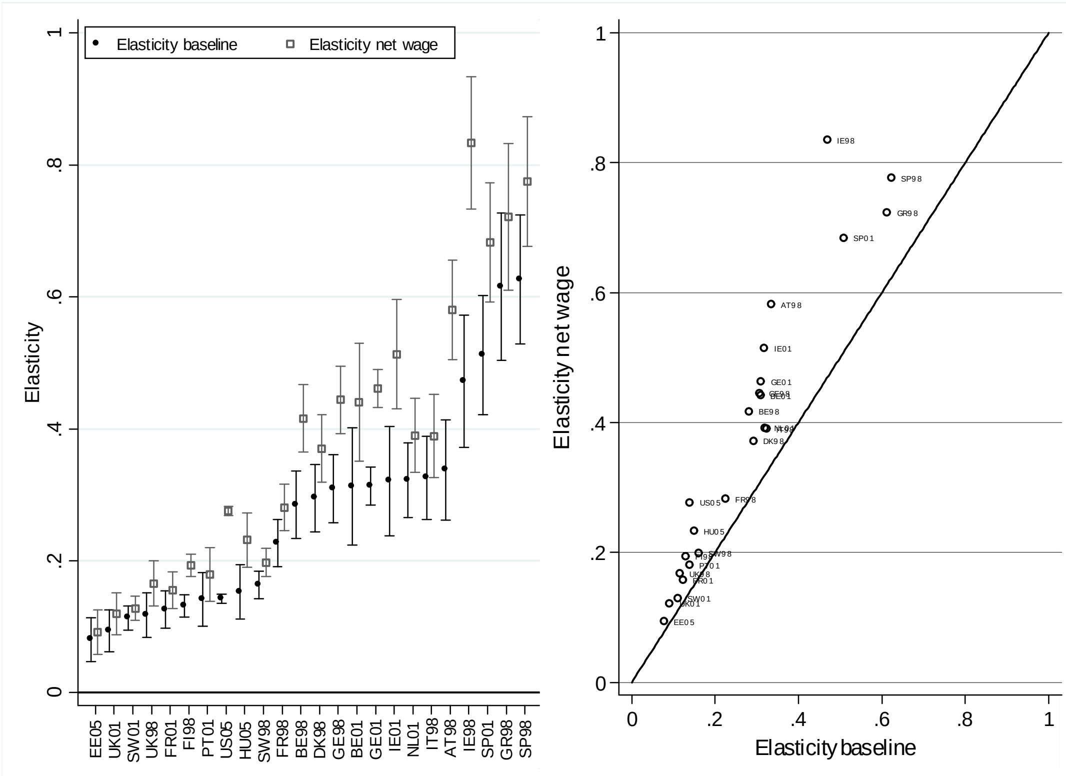

Figure 9: Effect of Tax-benefit Systems on Wage-Elasticities of Total Hours

5.3 Demographic Characteristics

We finally turn to the role of demographic composition. As indicated in Section 3.2, important differences exist across countries in this respect, notably the number of children but also the age and education structure. It is plausible that these demographic differences have an effect on the size of mean elasticities. To investigate this point, we decompose differences in elasticities across countries using an approach similar to that in Heim (2007). Let i denote a woman's age cohort, j her education group and k the number of her children.[21] Let $\epsilon_{ijk,c}$ denote the wage elasticity of total hours for a woman of type ijk in country c. The mean elasticity in this country, ϵ_c, can be written as a weighted average $\sum_i \sum_j \sum_k P_{ijk,c}\epsilon_{ijk,c}$, where $P_{ijk,c}$ denotes the proportion of women of type ijk in this country. This proportion can be re-written as $P_{ijk,c} = P_{i,c}P_{j|i,c}P_{k|ij,c}$ where $P_{i,c}$ denotes the proportion of women in age cohort i in country c, $P_{j|i,c}$ the proportion of women in education group j given membership in age

[21] In our application, we retain three age groups (aged 18-35, 36-45, and 45-59), two education groups and three family sizes (no children, 1-2 children, 3 children or more). Refining with three education groups leads to too many empty cells.

cohort i, and $P_{k|ij,c}$ denotes the proportion of women with k children given membership in age cohort i and education group j. Letting $\overline{P}$ denote the mean proportion of a certain type over all countries, the proportion $P_{ijk,c}$ can be expressed as:

$$\begin{aligned} P_{ijk,c} &= \overline{P}_i \overline{P}_{j|i} \overline{P}_{k|ij} + \left(P_{i,c} - \overline{P}_i\right) \overline{P}_{j|i} \overline{P}_{k|ij} \\ &\quad + P_{i,c} \left(P_{j|i,c} - \overline{P}_{j|i}\right) \overline{P}_{k|ij} + P_{i,c} P_{j|i,c} \left(P_{k|ij,c} - \overline{P}_{k|ij}\right). \end{aligned} \tag{4}$$

This expression can be used to decompose the mean elasticity where $\overline{\epsilon}_{ijk}$ denotes the mean elasticity for type ijk over all countries:

$$\begin{aligned} \epsilon_c &= \left(\sum_i \sum_j \sum_k \overline{P}_i \overline{P}_{j|i} \overline{P}_{k|ij} \overline{\epsilon}_{ijk}\right) + \left(\sum_i \sum_j \sum_k \left(P_{i,c} - \overline{P}_i\right) \overline{P}_{j|i} \overline{P}_{k|ij} \overline{\epsilon}_{ijk}\right) \\ &\quad + \left(\sum_i \sum_j \sum_k P_{i,c} \left(P_{j|i,c} - \overline{P}_{j|i}\right) \overline{P}_{k|ij} \overline{\epsilon}_{ijk}\right) + \left(\sum_i \sum_j \sum_k P_{i,c} P_{j|i,c} \left(P_{k|ij,c} - \overline{P}_{k|ij}\right) \overline{\epsilon}_{ijk}\right) \\ &\quad + \left(\sum_i \sum_j \sum_k P_{i,c} P_{j|i,c} P_{k|ij,c} \left(\epsilon_{ijk,c} - \overline{\epsilon}_{ijk}\right)\right). \end{aligned} \tag{5}$$

The decomposition starts with the overall mean weighted elasticity, a term common to all countries. The next term denotes how elasticities vary due to the different composition of age cohorts, keeping the distributions of education and family size constant within an age group. The variation in elasticities due to different education levels, keeping the distribution of the number of children within education levels constant, is captured in the third component. The fourth term indicates the difference in elasticities due to different distributions of family size. The last component denotes the difference in elasticities left to be explained by different elasticities within an age-education-children cell, which can be interpreted as a residual difference due to other factors than composition effects (for instance, differences in preferences). The results of this decomposition are presented in Figure 10. We show the deviation of the country-specific elasticities from the mean elasticity that can be attributed to differences pertaining to each of the three demographic factors as well as the residual, unexplained difference. It turns out that differences in demographic composition regarding age and education are never statistically significant. Variation in family size contributes very slightly to larger elasticities in some countries, including Estonia, France, Ireland, Portugal and Spain. Yet these differences are significant only in a few cases, and certainly do not explain the bulk of country differences. Once controlling for these composition effects, the residual term corresponding to "overall" differences in labor supply responsiveness shows a significantly positive effect for Greece, Ireland and Spain (the high-elasticity group) and a significantly negative effect for Finland, France, Sweden, the UK and the US (the low-elasticity group). Therefore, we must conclude that differences in demographic compositions between countries are not responsible for variations in labor supply elasticities.[22]

[22] We have checked that alternative decomposition paths – given the path dependency of the method – give similar results. Similar conclusions are also obtained when using the "net wage" elasticities.

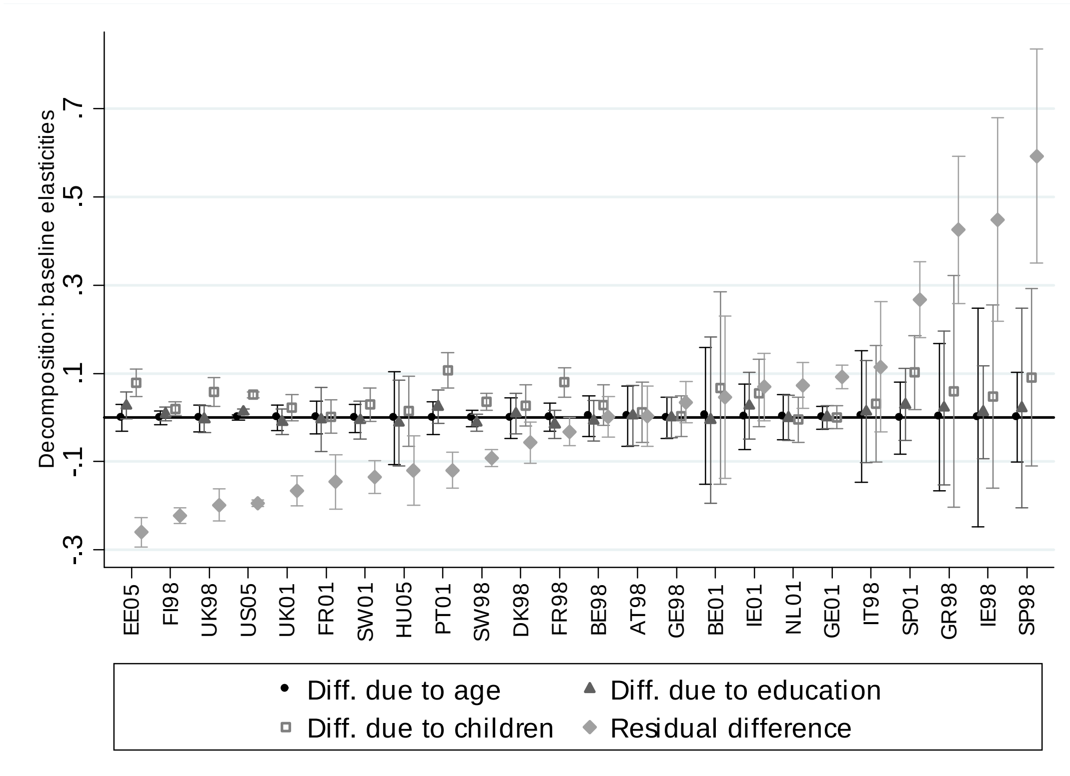

Figure 10: Deviation to the Mean Hour Elasticity due to Demographic Characteristics

5.4 Alternative Explanations

This leaves room for other explanations. Firstly, there may be genuine differences in work preferences, possibly due to long-lasting differences in culture and norms vis-à-vis female labor market participation. Secondly, and in a related way, social preferences may vary across countries and lead to different institutions, notably childcare arrangements. It may be the case that differences in some of the estimated parameters, and in particular the fixed costs of work, reflect country heterogeneity vis-à-vis non-simulated policies like childcare support. Difference in industrial or occupational composition may also play a role, as employment in France and the Nordic countries is often reported to be more stable due to better work-family reconciliation policies. The data at hand do not allow probing such differences across countries and we leave this for future research. Finally, an explanation in terms of selection can be put forward. We find that marriage rates are significantly higher in high-elasticity countries (the fraction of married women over single women is 6.3 in Ireland or 5.6 in Spain, compared to an average of 3.9 over all countries under study). Hence, it could be that married women in these countries cover a large range of the distribution of elasticities while the relatively smaller fraction of women who marry in France, the Nordic countries, the UK and the US are in the low range of this distribution. If this was the case, one would expect to find larger elasticities among single women in the latter group of countries. Our main results show that it is not the case – the cross-country correlation between elasticities of married and single women is positive (.25) – so this possible explanation can be ruled out.

6 Concluding Discussion

This paper presents new evidence on labor supply elasticities in 17 European countries and the US. Given the effort of adopting a common empirical approach, estimates are more comparable than usual results in the literature. The main lesson from the exercise is that elasticities are more modest than usually thought, and international differences are relatively small. We also show that the remaining variation across countries has little to do with selection into marriage, differences in tax-benefit systems or heterogeneity in demographic composition. It may rather reflect differences in individual and social preferences across countries, and primarily differences in work preferences and childcare policies, as captured by variation in labor supply parameters. As far as married women are concerned, these differences contribute to more intermittent labor force participation patterns in Greece, Ireland and Spain as opposed to more consistent participation and more constant hours in other countries and notably France, the Nordic countries, the UK and the US.[23] We show that estimates are fairly stable across model specifications.

Future work should consider both time and country variation. The present study was based on data years for which policy simulations were available for EU states (using the EUROMOD simulator). For a subgroup of countries, we have used two years of data with a three-year interval characterized by important tax-benefit reforms. This source of exogenous variation is usually called upon to improve the identification of behavioral parameters. In our case, results are not very sensitive, pointing to good performances of the cross-sectional identification strategy based on spatial variation and tax-benefit nonlinearities. In the elasticity of taxable income literature, changes in income between pairs of years are also related to changes in marginal tax rates between these years, however pooling a long panel of tax returns (see Saez et al., 2012). Ideally, we would like to gather many years of data for each country to allow for more exogenous variations in net wages. This is certainly an enormous task when trying to compare many countries and when accounting for complete tax-benefit systems.

Other improvements are necessary, notably a better modeling of demand-side constraints. This was not possible with the data at hand. A bias may stem from assuming that non-workers choose to be so. This bias primarily concerns single individuals, for whom involuntary unemployment may be an issue, but not so much married women and single mothers, two groups who frequently choose non-participation on a voluntary basis due to fixed costs

[23] This result corroborates the findings of Heim (2007) regarding time variation of elasticities in the US. Considering time rather than cross-country variation, Heim (2007) also finds that higher participation rates coincide with much smaller elasticities, and that this trend is not due to demographic changes but more likely to shifts in work preferences over time.

of work and preferences.

Despite these restrictions, we believe that the estimates provided in this paper can be useful for researchers who want to implement optimal tax or CGE models in a comparative framework and need to refer to "reasonable" values from the literature. In particular, our results can be exploited for applications in the field of taxation (see also Blundell et al., 2008). Two recent studies (Immervoll et al., 2007 and 2011) have conducted international comparisons of redistributive systems in Europe and their results could be reassessed in the light of the estimates provided in the present study. Immervoll et al. (2007) measure the implicit cost of redistribution using plausible elasticities and sensitivity analyses – but without information on actual cross-country differences. They assume that participation elasticity decreases with income levels. The implications of this assumption are crucial for welfare analysis (Eissa et al., 2008). Notably, the optimality of policies that support the working poor, compared to traditional "demogrant" policies, depends fundamentally on it. While very limited evidence exists, the present study broadly supports this assumption for single individuals, providing a precise range of estimates for each country.

Moreover, international comparisons of the tax treatment of couples by Immervoll et al. (2011) – essentially the long-studied issue of joint versus individual taxation – could be reevaluated using our new evidence on couples' labor supply elasticities. Related to this point, Heckman (1993) noted "*whether labor supply behavior by sex will converge to equality as female labor-force participation continues to increase is an open question*". This question has remained open up to now, and the present study contributes to answering it. In fact, we can draw from our results that male-female differentials in participation rates are strongly negatively correlated with male-female differentials in participation elasticities ($corr = -.89$).[24] Hence, the Ramsey argument against high implicit taxation of secondary earners and the subsequent deadweight loss from joint taxation (or, more frequently, from joint income assessment for benefit or tax credit eligibility) can now be assessed on the basis of comparable estimates for many countries.

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[24] In Nordic countries, the gender participation gap is below 10 points and coincides with insignificant gender differences in labor supply elasticities. In Spain or Greece, men's participation is above women's by a large margin (around 50 points) and the gender difference in elasticities is significant and larger than .45. Most EU countries and the US are somewhere between these two extreme cases.

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Comparing Labor Supply Elasticities in Europe and the US: New Results

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Appendices

This document gathers the following additional results:

Note: In all tables, countries are denoted as:

AT=Austria,	GR=Greece,	UK=the United Kingdom,
BE=Belgium,	IE=Ireland,	SW=Sweden,
DK=Denmark,	IT=Italy,	EE=Estonia,
FI=Finland,	NL=the Netherlands,	HU=Hungary,
FR=France,	PT=Portugal,	PL=Poland,
GE=Germany,	SP=Spain,	US=the United States,

and reported years correspond to the period when income information was collected.

A Labor Supply Elasticities: A Short Survey

We present here existing evidence on labor supply elasticities for European couples (Tables A.1 and A.2), European single individuals (Table A.3) and the US (Table A.4).[1] This survey essentially distinguishes between estimates based on structural models (the Hausman approach and discrete choice models), grouped estimations and natural experiments. We put a certain emphasis on the studies based on discrete choice models with taxation, as this method is being used in the paper and in an increasingly large number of studies around the world that aim to analyze the effect of fiscal and welfare programs. Yet we do not pretend to be exhaustive, simply to give a sense of the range of elasticities obtained in the literature for Europe and the US.[2] Some studies actually do not report elasticities and were not included in our tables (e.g., Hoynes, 1996).

While most elasticities come from the estimation of structural models of labor supply, a few studies use grouped data estimations of the correlation between hours/participation and wages over a long period to address the problem of measurement error in hourly wages (e.g., Devereux, 2003, 2004, Blundell et al., 2008). As for natural experiments, the recent literature has exploited tax-benefit reforms of the 1980s and 1990s in the US and the UK to assess labor supply responsiveness (e.g., US income tax reforms, AFDC/TANF reforms, extensions of the EITC or the UK tax credit; see the survey of Hotz and Scholz, 2003, for the US). However, many of these important studies report the effects of reforms but do not provide comparable elasticity measures, so they could not be included in our tables (this is notably the case of Bingley and Walker, 1997, Eissa and Liebman, 1996). Also, most of these reforms concerned families with children so that very few estimates are available for childless single individuals, as we can see in Table A.4 for the US and as discussed in the paper. Finally, we witness the lack of important reforms or policy discontinuity in Europe, which is reflected in Tables A.1-A.3. Indeed, most studies for Europe are based on the estimation of structural models with taxation (a notable exception is the UK).

From Tables A.1 and A.2, a first observation is that early evidence using the Hausman technique points to relatively large *own-wage elasticities for married women*, sometimes close to 1, or even larger, for instance in early studies for France, Germany, Italy or the UK. We also observe lots of variation across countries, that may not correspond to genuine international differences in preferences and responsiveness but more to the heterogeneity in methodological choices. In contrast, recent evidence based on discrete-choice models shows more modest elasticities for

[1] The reference list can be found at the end of this document.

[2] This survey substantially completes previous reviews on static labor supply models, notably Blundell and MaCurdy (1999) and Meghir and Phillips (2008), who concentrate mainly on evidence from the Hausman model, for the 1980s and 1990s and for Anglo-Saxon countries. Note that we do not cover life-cycle models or other margins than hour/participation (migration, tax evasion, work effort, etc.), however. Evidence on the elasticities of taxable income is surveyed in Meghir and Phillips (2008) and Saez et al. (2012). Evidence from life-cycle models is reviewed by Meghir and Phillips (2008), Keane, (2011) and Keane and Rogerson (2012).

this demographic group, in a range between .1 and .5, with some exceptions. In Table A.4, we observe a similar pattern for the US, with very large estimates in early studies, including Hausman (1981), and more modest and comparable elasticities in the recent studies (hour elasticities ranging between .2 and .4). Several explanations are provided in the literature. With the Hausman approach, the combination of restrictive functional forms (linear labor supply) and estimation methods that impose theoretical consistency of the labor supply model everywhere in the sample (global satisfaction of Slutsky conditions) leads to biased estimates and possibly an overstatement of work incentives (see Heim and Meyer, 2003). Mroz (1987) discusses how the wage effects of married women's labor supply varied dramatically depending on whether and how one controlled for nonrandom selection into work as well as to alternative exclusion restrictions in the instrument set for wages. Bourguignon and Magnac (1990) discuss the sensitivity of their results to the inclusion of fixed costs. Also, larger elasticities in early studies may simply be due to the period of investigation and the fact that female participation was still relatively low in many countries in the 1980s. More recent evidence coincides with rising participation rates and a mechanical decline in female elasticity, as established for the US in Blau and Kahn (2005) and Heim (2007). Interestingly, for married women, recent period estimates for the US are very similar whether they stem from grouped estimations (Devereux, 2004), natural experiments (Eissa and Hoynes, 2004) or structural models (Heim, 2009), which gives extra confidence in the latter method, the one adopted in our paper.

Evidence for other demographic groups is more limited. Estimates for *married men* are usually very small, often not significant and sometimes even negative. There are few exceptions, with larger elasticities in Ireland and in some of the German studies, as seen in Tables A.1 and A.2. Evidence for *childless single individuals*, gathered in Table A.3, is very limited and points to very small elasticities. Yet participation responses vary with income levels, as shown in the paper (see also suggestive evidence in Eissa and Liebman, 1996). More numerous studies are available concerning *single mothers*. This group has received much attention because of its importance for welfare analysis, given its higher risk of poverty, and because single parent families were primarily concerned by reforms like EITC extensions in the US (see the survey by Hotz and Scholz, 2003). This group is found to be more responsive to financial incentives than the average, at least in the US and the UK. This is confirmed in Tables A.3 and A.4, where relatively large elasticities are shown in several studies – but not all – for the UK, the US and Sweden. Our results in the paper show that recent estimates for many countries, and even for Anglo-saxon countries, are not as large as in older periods.

It is noticeable that studies for a given country sometimes report very different magnitudes, even when the same method is used. For instance for the US, married women's wage elasticity obtained with the Hausman approach vary from .28 (Triest) to .97 (Hausman), depending on the constraints put on the model (see the discussion in Heim and Meyer, 2003). For France, estimates for married women are also very high with the basic Hausman model, but almost zero when introducing fixed costs (in this case, the model accounts only for variation in hours, cf., Bourguignon and Magnac, 1990). Estimates obtained with discrete choice models are somewhat more comparable from one study to the next. Yet there are still differences, which are more likely driven by selection criteria (for France, high elasticities are found for families with children in Choné et al., 2003) and the type of data (administrative data in Laroque and Salanié, 2002, household surveys in Bargain and Orsini, 2006). Specifications and modeling choices may play a role in the discrete choice approach as well, for instance regarding the treatment of couples (e.g., male-chauvinistic model in Bargain and Orsini, 2006, joint decisions in Bargain et al., 2009). It is rare to find several studies focusing on the same country and using a similar empirical approach. This would offer an interesting confidence range (this exists for Germany, with fairly consistent results for married women, yet relatively contrasted estimates for single women across studies).

Finally, let us comment briefly on *income elasticities*. As discussed in the paper, most studies show negative income elasticities (positive income elasticities of non-market time) as predicted by theory, at least when non-market time is leisure. The main exceptions are Finland and Sweden. Despite being at odds with theory, positive income elasticities are encountered in some studies (including Kuismanen, 1997, for Finland; Flood and MaCurdy, 1992, for Sweden; van Soest, 1995, for the Netherlands; Blau and Kahn, 2007, and Cogan, 1981, for the US). Also, despite being generally small, income elasticities vary across countries. Blundell and MaCurdy (1999) report that variation between studies regarding income elasticity appears to be greater than the corresponding variation with respect to wage elasticities. In our estimates, we find that elasticities are indeed small everywhere but show some dispersion: over all countries and periods, we find a mean income elasticity of $-.0024$ ($-.0028$) and a standard deviation of .0028 (.0038) for married women (men).

What have we learnt about international differences from existing studies? For the group of married women for whom we have the largest number of studies, larger elasticities prevail in countries where women's participation is low. This is particularly true for Ireland (see Callan et al., 2009) and Italy (see Aaberge et al., 2002). In contrast, women's participation is high in Nordic countries and elasticities tend to be fairly small (an exception is Blomquist and Hansson-Brusewitz, 1990, for Sweden, but the authors examine data from the 1980s, while more recent evidence by Flood et al., 2004, confirm small hour elasticities for this country). Comparing Italy and Norway/Sweden, Aaberge et al. (2000) show that lower participation rates among married women in Southern Europe leads to a larger potential for reforms that increase financial incentives to work. Apart from these extreme cases, differences across countries may not be very large, as suggested by Evers et al. (2008). However, as argued above, comparisons are muddled by the methodological differences highlighted above (data, period, empirical approach) and are incomplete (estimates are missing for several countries and demographic groups). This justifies the present paper.

Table A.1: Labor Supply Elasticities in Europe: Couples

Country	Authors	Data selection	Model	Specification	Tax-benefit	Female wage elast.		Male wage elast.		Income elast.	
						hours	particip.	hours	particip.	female	male
Austria	Dearing et al. (2007)	SILC (2004), at least 1 child aged <10	D	QU; M	ITABENA		[.07, .19] @				
Belgium	Orsini (2006, 2007)	Panel Survey of Belgian Households (2001), working age	D	QU and GU + PTD; J	MODETE	[.16, .31]	[.10, .19]	[.10, .18]	[.08, .15]		
Finland	Kuismainen (1997)	LFS (1989), survey & tax register; 25-60	C	SL, R	PL	[0, .06]				[.11, .27]	
	Bargain & Orsini (2006)	IDS (1998), working age, men all employed	D	QU + FC; M	EUROMOD	[.10, .18]	[.10, .17]*				
France	Bourguignon & Magnac (1990)	LFS (1985), couples aged 18-60	C/T	LL + R; M or J	PL, D	1 (.05 with FC)		.10		-.03 (-.02 with FC)	-.07
	Laroque & Salanie (2002)	matched LFS-Tax returns (1999), women aged 25-49	D	joint particip. & wage; unempl. & min. wage	own calc.		(.96)			/ -.11*	
	Choné, Le Blanc & Robert-Bobée (2003)	matched LFS-Tax returns (1997), working age, children aged <6	D	QU, joint wage & CC; min. wage	own calc.	1.05	[.8, .9] @			-.19 / -.18*	
	Bargain & Orsini (2006)	HBS (1994/5), working age women, men all employed	D	QU + FC; M	EUROMOD	[.52, .65]	[.46, .58]*				
	Donni & Moreau (2007)	HBS (2001), aged 20-60, all employed, no children aged<3	C	QL; s-conditional collective LS	no taxation	[.24, .59]				[-.35, -.06]	
Germany	Kaiser et al. (1992)	SOEP (1983), working age	C	LL	C, NC, D	1.04		-.04		-.18	-.28
	Bonin, Kempe & Schneider (2002)	SOEP (2000), working age, W & E	D	TL + PTD; J	IZAmod	.27	.20	.21	.19	.15 / .09	.01 / 0
	Steiner & Wrohlich (2004)	SOEP (2002), working age, W & E	D	TU + PTD; J	STSM	[.16, .55] @	[.07, .21] @	[.11, .38] @	[.07, .23] @		
	Haan & Steiner (2005)	SOEP (2002), working age, W & E, one- or two-earner couples	D	TU + PTD; J	STSM	[.08, .56]	[.04, .20]	[.08, .46]	[.07, .26]		
	Bargain & Orsini (2006)	SOEP (1998), working age, men all employed, W & E	D	QU + FC; M	EUROMOD	[.31, .45]	[.27, .38]*				
	Clauss & Schnabel (2006)	SOEP (2004/5), couples aged 20-65	D	TU; J	STSM	.37	.14	.24	.16		
	Wrohlich (2006)	SOEP (2002), working age, W & E	D	TU; J; CC	STSM	[.14, .53] @	[.06, .16] @				
	Dearing et al. (2007)	SOEP (2004), at least 1 child aged <10, W	D	QU; M	STSM		[.13, .24] @				
	Bargain et al. (2009)	SOEP (2003), working age, potential one- or two-earner	D/H	QU + PTD, R; J	STSM	[.19, .34]	[.08, .20]	[.05, .08]	[.04, .13]		
	Fuest et al. (2008)	SOEP (2004), working age, W & E, potential one- or two-earner	D	TU+PTD;J	FiFoSiM	0.38	0.15	0.20	0.14		

Data: Income Distribution Survey (IDS), Household Budget Survey (HBS), Socio Economic Panel (SOEP), Family Expenditure Survey (FES), Labor Force Survey (LFS), EU Statistics on Income and Living Conditions (SILC). For Germany: West (W), East (E).

Model: C = continuous labor supply (Hausman 1981 type); T = tobit model; D = discrete-choice model (van Soest 1995 type); A = estimation of joint distributions of wage and hours (sets of hour-wage opportunities vary across individuals); H = double hurdle model (labor supply and risk of unemployment).

Specification: for Hausman model, labor supply is either linear (LL), quadratic (QL) or semi-log (SL); in discrete-choice models, utility is either quadratic (QU), translog (TU) or generalized Stone-Geary (GU); random preferences are sometimes accounted for (R) as well additional flexibility, either through fixed costs (FC) or part-time dummies (PTD). Models are male-chauvinistic (M) or account for joint decision in couples (J). Welfare programme participation (W). Childcare costs (CC).

Tax-benefit: Hausman model often accounts for piecewise-linear budget set (PL) or more generally convex set (C); nonconvexities are sometimes accounted for (NC); differentiability of the budget function can be used (D); with discrete choice models, complete tax-benefit systems are simulated and we indicate the name of the microsimulation model when it is known.

Elasticities: brackets indicate the range of values for all specifications (or the confidence interval when available). '@ indicates that the range also includes values for different age and number of children. Particip. = participation elasticities, corresponding to the increase in employment rate in % points, except when indicated by * (in that case, % increase in employment rate).

Table A.2: Labor Supply Elasticities in Europe: Couples (cont.)

Country	Author	Data selection	Model	Specification	Tax-benefit	Female wage elast.		Male wage elast.		Income elast.	
						hours	particip.	hours	particip.	female	male
Ireland	Callan & van Soest (1996)	IDS (1987), desired hours	D/H	TU + FC, R; J	SWITCH	[.50, .85]	.31 /.20*	[.10, .20]			
	Callan, van Soest & Walsh (2009)	Living in Ireland Survey (1995), desired hours	D	TU + FC, R; J	SWITCH	[.71, .90]	.49	[.21, .31]	.20 /.21*		
Italy	Colombino & Del Boca (1990)	Turin Survey of Couples (1979), working age	C	LL	PL	1.18	.64			.52	
	Aaberge et al. (1999)	Survey of Income and Wealth (1987), aged 20-70	A	non-linear hours, exog. wage and unearned inc.	own calc.	.74	.65	.053	.046	/ -.014	/ -.003
	Aaberge et al. (2002, 04)	Survey of Income and Wealth (1993)	A	GU; J	own calc.	.66	.51	.12	.02		
Netherlands	van Soest et al. (1990)	Labor mobility survey (1985), working age	C/D	LL, R; discrete wage-hours combinations	PL	[.35, .59]	.12	[.15, .19]		-.23	-.01
	van Soest (1995)	SOEP (1987)	D	TU + PTD, R; J	own calc.	[.42, .54]	-	[.05, .09]	-	.008	-.03
	van Soest & Das (2001)	SOEP (1995), aged 16-64, desired hours	D	TU + FC, R; J	own calc.	[.67, .74]	-	[.07, .10]	-		
	van Soest et al. (2002)	Dutch SOEP (1995), aged 16-64, desired hours	D	QU (+ more flexible) + FC, R; simult. wage estimation, J	own calc.	[.83, 1.36]	[.35, .58]*				
Spain	García and Suárez (2003)	ECHP (1994-95), aged 16-65, obs. and desired hours	C	LL	taxes	.37	1.51*			-.06	
	Fernández-Val (2003)	ECHP (1994-99), aged<65 and in work	C	unitary/collective model	no taxation	.31					
	Crespo (2006)	ECHP (1994-99), aged<65 and in work	C	QL, unitary/collective	no taxation	.14		.01			
	Labeaga, Oliver & Spadaro (2008)	ECHP (1995), working age	D	QU + FC; J	GLAD-HISPANIA	.29	.26	.01	.11		
Sweden	Blomquist (1983)	Level of Living Survey (1974), all employed, aged 25-55	C	LL, R	PL			.008			-.03
	Flood & MaCurdy (1992)	Household Market-Nonmarket Survey (1983), all employed, 25-65	C	LL and SL, R	PL, D			[.-.25, .21]			[.-.01, .04]
	Blomquist & Hansson-Brusewitz (1990)	Level of Living Survey (1981), all employed, aged 25-55	C	LL and QL, R	PL, C and NC	[.38, .77]		[.08, .13]		[-.24, -.03]	
	Blomquist & Newey (2002)	Level of Living Survey (1973, 80, 90), all employed, aged 18-60	C	non-parametric labor supply	PL			[.04, .12}			-.02
	Flood, Hansen & Wahlberg (2004)	Household Income Survey (1993), aged 18-64	D	TU, R; stigma of W	own calc.	.12		0		-0.017	-0.003
	Brink et al. (2007)	Longitudinal Individual Data, Income Distribution Survey, 1999	D	TU, R	FASIT	.18	.15	.06	0		
UK	Arellano & Meghir (1992)	British FES and LFS (1983), aged 20-59, with pre-school children (upper bound for all children)	C	SL + FC, search costs, endogenous wage and unearned income (IV)	PL	[.29, .71]	-			[-.13, -.40]	
	Arrufat & Zabalza (1986)	British General Household Survey (1974), aged <60	C	CES utility based labor supply, R	PL	[.62 - 2.03]	1.41			-.2 / -.14	
	Blundell & Walker (1986)	FES (1980), all employed, aged 18-59	C	Gorman polar form and translog hours, R	PL			.024			-.287
	Blundell, Ham & Meghir (1987)	FES (1981), aged 16-60	T/H	non-linear labor supply, unemployment risk	own calc.		[.04, .08]				
	Blundell, Duncan & Meghir (1998)	FES (1978-1992), 20-50, young children (lower bound if no child)	C	generalized LES, R	PL	[.13, .37] @	-			[-.19, 0] @	
	Blundell et al. (2000)	Family Resources Survey (1994-96)	D	QU + FC, R, W	TAXBEN	[.11 - .17]					

Note: see previous table. For Spain, several additional references are cited in García and Suárez (2003) which point to similar elasticities as in the basic model in this study.

Table A.3: Labor Supply Elasticities in Europe: Single Individuals

Country	Author	Data selection	Model	Specification	Tax-benefit	wage elasticites hours	wage elasticites particip.	income elast.
Finland	Bargain & Orsini (2006)	IDS (1998), SW, SP	D	QU + FC	EUROMOD	[.18, .34]	[.18, .33]	
France	Bargain & Orsini (2006)	HBS (1994/5), aged 25-49, SW, SP	D	QU + FC	EUROMOD	[.08, .14]	[.04, .07]	
	Laroque & Salanie (2001)	LFS-Tax return matched dataset (1999), women aged 25-49, no civil servants, SW	D	participation (and full/part-time) model, simultaneous wage and labor supply estimation, probability of unemployment, min. wage	own calc.		{.36}	
Germany	Bargain & Orsini (2006)	SOEP (1998), SW, SP	D	QU + FC	EUROMOD	[.09, .18]	[.08, .15]	
	Steiner & Wrohlich (2004)	SOEP (2003), SW	D	TU + PTD	STSM	[.20, .36]	[.05, .09]	
	Haan & Steiner (2005)	SOEP (2002), SW	D	TU + PTD	STSM	[.02, .24]	[.01, .10]	
		SM				[.08, .31]	[.04, .28]	
	Clauss & Schnabel (2006)	SOEP (2004/5), aged 20-65, SW	D	TU + PTD	STSM	.38	.18	
		SM				.23	.17	
	Bargain et al. (2009)	SOEP (2003), working age, SW	D/H	QU + PTD; involuntary unemployment	STSM	[.06, .16]	[.04, .10]	
		SM				[.10, .20]	[.05, .12]	
	Fuest et al. (2008)	SOEP (2004), working age, SW	D	TU + PTD	FiFoSiM	0.28	0.13	
		SM				0.28	0.17	
Italy	Aaberge et al. (2002)	Survey on Household Income and Wealth (1993), SW	A	GU	own calc.	.10	.06	
		SM				.11	.08	
Netherlands	Euwals & Van Soest (1999)	Dutch SOEP (1988), actual and desired hours, SW	D	TU + FC, R	own calc.	[.03, .45]		
		SM				[.03, .18]		
Sweden	Andren (2003)	HINK (1997-98), SP	D	QU + FC; simulat. with W and CC	own calc.	[.55, .87]	.50	-0.1
	Brink et al. (2007)	Longitudinal Individual Data, IDS, 1999, SP	D	TU, R	FASIT	.51	.35	
UK	Walker (1990)	FES (1979-84), SP	D	participation model	benefits only		.70	
	Ermisch & Wright (1991)	General household survey (1973-82), SP	D	participation model, demand-side controls	simplified system		1.7	
	Jenkins (1992)	Lone parents survey (1989), SP	D+H	two positive hour choices, unemployment risk, FC	benefits only		1.8	
	Blundell, Duncan & Meghir (1992)	FES (1981-1986), SP	C	marginal rate of substitution function, endogenous wage and income	taxation only		.34	
	Brewer et al. (2006)	FES (1995-2002), aged <60, SP	D	QU + FC, joint with W and CC, R	TAXBEN		1.02	

Data & Selection: Income Distribution Survey (IDS), Household Budget Survey (HBS), Socio Economic Panel (SOEP), Family Expenditure Survey (FES), Labor Force Survey (LFS); Selection: single women (SW), single men (SM), single parents/mothers (SP)

Model: C = continuous LS (Hausman 1981 type); T = tobit model; D = discrete model (van Soest, 1995 type); A = estimation of joint distributions of wage and hours (sets of hour-wage opportunities vary across individuals); H = double hurdle model (labor supply and risk of unemployment).

Specification: for Hausman model, labor supply is either linear (LL), quadratic (QL) or semi-log (SL); in discrete-choice models, utility is either quadratic (QU), translog (TU) or generalized Stone-Geary (GU); random preferences (R); fixed costs (FC); welfare participation (W); childcare costs (CC)

Tax-benefit: Hausman model often accounts for piecewise-linear budget set (PL) or more generally convex set (C); nonconvexities are sometimes accounted for (NC); differentiability of the budget function can be used (D); with discrete choice models, complete tax-benefit systems are simulated and we indicate the name of the microsimulation model when it is known.

Elasticities: brackets indicate the range obtained in function of the specification at use, or the confidence interval when available. Particip. = participation elasticities, corresponding to the increase in employment rate in percentage points.

Table A.4: Labor Supply Elasticities for the US

Authors	Data selection	Model	Specification	Female wage elast.		Male wage elast.		Income elast.	
				hours	particip.	hours	particip.	female	male
Cogan (1981)	US National Longitudinal Study of Mature Women 1967, married women aged 30-35	C	SL; reservation hours to account for FC; no tax-benefit	[.86 , 2.40]				[.16 , .66]	
Hausman (1981)	PSID 1975, married women	C	LL, PL (C and NC: FC)	[.90 , 1.00]				[-.13 , -.12]	
Triest (1990)	PSID 1983, married women, aged 25-55	C	LL; C and PL; taxes and benefits	[.03 , .28]				[-.15 , -.19]	
MaCurdy, Green & Paarsch (1990)	PSID 1975: married men, aged 25-55	C	LL; PL and D (reconvexified) budget set; taxes			[-.24, .03]		-.01	
Dickert, Houser and Scholz (1995)	SIPP 1990, single mothers, no assets	D	joint program and labor force participation		.35				
Pencavel (1998)	CPS 1975-94, women aged 25-60	C	Log-L; no tax-benefit		[.77,.1.80]				
Hoynes (1996)	SIPP panel, 1984, married men and women with children	D	Stone-Geary; stigma from AFDC; tax-benefit system; FC					- .46	- .12
Keane and Moffitt (1998)	1994 SIPP, single mothers, no assets	D	joint labor supply and welfare program participation; benefits but no tax		.96				
Pencavel (2002)	CPS 1999, married and single men	C	LL; no tax-benefit			[.12,.25]			
Devereux (2003)	Census and PSID, all men	C	Log-L, no tax-benefit			[–.022, .017]	[–.061, .001]		
Devereux (2004)	PUMS 1980,1990, married couples (participating men)	C	Log-L, no tax-benefit	[.17,.38]		[.00,.07]			
Eissa & Hoynes (2004)	CPS 1985 to 1997, less educated married couples with children	D	Participation Probit, joint estimation		0.27		.03	-.039	-.007
Blau & Kahn (2007)	CPS 1980, married men and women age 25-54	C	Log-L	[.77,.88]		[.01,.07]		.004	.001
	CPS 1990	C	Log-L	[.58,.64]		[.10,.14]		.002	.002
	CPS 2000	C	Log-L	[.36,.41]		[.04,.10]		.001	.002
Heim (2009)	PSID 2001, couples		quadratic utility with continuous labor supply, J, FC, R	[.24,.33]	[.07,.18]	[.04,.07]	[.00,.003]	[-.007, -.006]	[-.0007,-.0004}
Bishop et al. (2009)	CPS, 1979-2003, sing. women		SL, participation, some account for tax	.14 (1979) to -.03 (2003)	.28 (1979) to .22 (2003)			-.014 (1979) to -.019 (2003)	
Heim (2007)	CPS, 1979-2003, married women		SL, participation, some account for tax	.36 (1979) to .14 (2003)	.66 (1979) to .03 (2003)			-.05 (1979) to -.015 (2003)	

Data: Current Population Survey (CPS), Panel Study on Income Dynamics (PSID), Public Use Microdata Sample (PUMS), Survey of Income and Program Participation (SIPP)

Model: C= continuous labor supply (Hausman 1981 type); D= discrete-choice model (often a simple participation probit)

Specification: Hausman labor supply is either linear (LL), log-linear (Log-L) or semi-log (SL); random preferences are sometimes accounted for (R) as well as fixed costs (FC). Models sometimes account for piecewise-linear budget set (PL) or more generally convex set (C) or nonconvexities (NC), and differentiable budget constraint (D).

Elasticities: brackets indicate ranges of values over different specifications, or reported confidence intervals. Participation elasticities ("particip"): increase in employ. rate in % points.

B Descriptive Statistics and Hour Distribution

Table B.1 presents the datasets at use and the main statistics of the sample selected for wage and labor supply estimations. As further described in the next section for the wage estimations, demographics are defined in a comparable way across countries. The number of children corresponds to children living in the household. For comparability purposes, we define only three education categories ("high", corresponding to tertiary education and reported in Table B.1, "low" corresponding to no education and junior school, and "middle"). Table B.2 reports the hour distribution for all countries. Hours are based on contract hours in order to avoid seasonality issues for datasets collected in time of bank holidays or holidays. In all countries, earnings correspond to basic salary plus bonuses and additional payments.

Table B.1: Descriptive Statistics (Selected Samples)

Country	AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT	NL	PT	SP	SP	UK	UK	SW	SW	EE	HU	PL	US
Year	98	98	01	98	98	98	01	98	01	98	98	01	98	01	01	98	01	98	01	98	01	05	05	05	05
Data	ECHP	PSB		ECHP	IDS	HBS		SOEP		HBS	LIS		SHIW	SOEP	ECHP	ECHP		FES		IDS		HBS	HBS	HBS	CPS
Couples																									
Women																									
Age	39	39	40	38	40	38	39	39	39	38	40	42	39	38	37	39	39	37	38	39	41	43	38	39	39
Tertiary educ.	.26	.09	.10	.38	.42	.20	.26	.30	.33	.24	.12	.21	.09	.27	.12	.17	.26	.29	.35	.31	.36	.40	.19	.19	.33
Hourly wage	9.9	11.4	12.8	13.3	10.4	10.2	10.1	11.4	11.8	3.8	7.6	10.8	7.4	11.4	4.3	5.6	6.4	8.6	11.3	10.3	11.6	2.0	2.1	2.3	13.8
Weekly hours	17.2	24.1	24.5	28.6	31.7	23.2	23.9	19.7	20.8	13.3	11.3	17.7	15.1	18.6	27.5	12.2	15.0	21.3	22.6	28.3	30.6	33.4	28.8	23.2	26.9
Weekly hours*	29.9	32.8	32.4	34.4	37.4	33.9	33.0	29.8	29.6	36.6	29.4	29.5	33.0	25.4	38.0	34.5	34.9	30.3	30.3	32.3	33.0	38.9	38.9	37.9	38.1
Particip. rate	.57	.73	.75	.83	.85	.68	.73	.66	.70	.36	.38	.60	.46	.73	.72	.35	.43	.70	.75	.88	.93	.86	.74	.61	.71
Men																									
Age	42	41	42	40	42	40	41	41	41	42	42	44	42	41	40	41	41	39	40	42	43	45	41	41	41
Tertiary educ.	.26	.12	.13	.37	.38	.19	.25	.38	.39	.26	.18	.23	.10	.34	.09	.23	.27	.28	.31	.30	.32	.23	.17	.14	.32
Hourly wage	14.9	14.3	15.6	16.4	14.0	12.6	12.9	15.3	16.2	5.4	10.9	14.9	9.2	16.3	5.5	7.3	8.2	12.8	16.6	13.5	15.8	2.7	2.8	3.2	20.3
Weekly hours	40.8	39.2	39.7	37.5	37.8	38.5	38.3	35.3	35.5	38.5	32.4	37.0	36.3	39.2	40.8	37.6	39.7	37.8	37.9	35.6	36.8	36.0	37.7	33.3	41.1
Weekly hours*	42.1	42.0	41.7	40.9	41.5	41.4	40.7	38.1	38.2	42.6	41.6	40.4	39.9	40.7	42.2	43.1	42.6	44.3	42.8	38.5	38.3	40.9	42.1	38.7	44.4
Particip. rate	.97	.93	.95	.92	.91	.93	.94	.92	.93	.90	.78	.91	.91	.96	.97	.87	.93	.85	.89	.93	.96	.88	.89	.86	.93
# children	1.5	1.5	1.5	1.2	1.3	1.5	1.4	1.3	1.2	1.5	2.4	2.2	1.7	1.3	1.4	1.7	1.5	1.3	1.3	1.1	1.3	1.5	1.5	1.7	1.5
1(children 0-2)	.13	.14	.14	.18	.15	.19	.18	.13	.11	.10	.23	.17	.14	.18	.17	.14	.16	.20	.17	.18	.15	.03	.15	.15	.19
Single women																									
Age	40	41	42	38	42	39	40	38	38	43	40	41	42	39	44	42	42	38	39	37	40	45	43	42	40
Tertiary educ.	.32	.10	.11	.35	.38	.24	.31	.33	.39	.24	.13	.19	.12	.33	.15	.31	.35	.25	.32	.29	.34	.35	.22	.23	.27
Hourly wage	11.3	11.6	13.3	13.2	10.9	10.1	10.6	12.4	12.3	3.6	7.4	9.7	8.0	11.6	5.0	6.3	7.2	8.9	11.8	10.6	11.8	2.0	2.6	2.5	13.4
Weekly hours	29.3	25.2	27.2	27.5	31.0	29.7	28.8	25.8	26.9	21.9	17.8	22.7	26.8	25.2	29.7	26.7	28.0	20.3	22.3	25.8	29.7	33.6	33.7	26.2	32.7
Weekly hours*	34.4	35.3	34.6	34.5	37.9	35.1	34.9	33.1	33.2	39.3	34.9	31.2	35.2	31.8	37.7	37.6	36.2	33.1	33.8	32.1	33.0	39.3	39.4	37.1	40.4
Particip. rate	0.85	0.72	0.79	0.80	0.82	0.85	0.83	0.78	0.81	0.56	0.51	0.73	0.76	0.79	0.79	0.71	0.78	0.61	0.66	0.80	0.90	0.86	0.86	0.71	0.81
# children	0.8	0.7	0.8	0.6	0.6	0.7	0.7	0.7	0.6	0.8	1.4	1.3	0.8	0.5	1.0	1.0	0.8	1.1	1.0	0.4	0.7	1.0	1.0	1.2	1.0
Single men																									
Age	38	40	43	37	39	38	39	38	38	38	41	41	39	37	40	40	40	38	40	35	38	40	41	41	40
Tertiary educ.	.26	.09	.07	.34	.27	.22	.31	.36	.34	.34	.20	.17	.16	.35	.06	.25	.29	.31	.35	.21	.27	.14	.17	.14	.27
Hourly wage	13.6	12.3	14.0	15.0	11.7	11.3	11.2	14.3	14.5	4.7	8.7	10.4	8.6	13.0	4.5	6.6	7.2	11.0	13.9	11.3	13.4	1.7	2.5	2.4	15.9
Weekly hours	37.0	35.0	34.7	31.9	30.7	33.7	33.2	31.7	32.6	31.7	25.3	27.4	28.5	35.0	33.2	28.0	33.2	29.3	32.3	26.6	30.9	30.7	33.0	23.1	36.2
Weekly hours*	39.7	40.6	41.3	38.2	40.5	39.1	37.8	36.8	36.5	41.3	41.0	37.9	37.8	37.8	42.1	40.4	40.6	42.2	40.4	34.5	34.9	40.4	41.0	36.8	42.8
Particip. rate	0.93	0.86	0.84	0.83	0.76	0.86	0.88	0.86	0.89	0.77	0.62	0.72	0.75	0.93	0.79	0.69	0.82	0.70	0.80	0.77	0.88	0.76	0.80	0.63	0.84
# children	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.1	0.2	0.0	0.1	0.1	0.2	0.3	0.2
Sample size	1,323	1,933	1,480	1,912	4,813	6,377	5,764	4,490	4,164	1,634	1,898	1,502	3,014	2,569	1,812	2,857	2,344	3,197	3,070	9,861	7,499	1,547	2,683	14,695	38,119

Selected sample: household with working-age adults (either employed, unemployed or inactive). For this table and the following ones: Policy years are 1998, 2001 or 2005; Countries are: AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, GE=Germany, GR=Greece, IE=Ireland, IT=Italy, NL=the Netherlands, PT=Portugal, SP=Spain, UK=the United Kingdom, SW=Sweden, EE=Estonia, HU=Hungary, PL=Poland, US=the United States. Reported years correspond to the period when income information was collected. Datasets are: ECHP=European Community Household Panel, PSB=Panel Survey on Belgian Households, HBS=Household Budget Survey, IDS=Income Distribution Survey, SOEP=German or Dutch Socio-Economic Panel, LIS=Living in Ireland Survey, SHIW=Survey of Households Income and Wealth, FES=Family Expenditure Survey, CPS=Current Population Survey. Hourly wage rates are converted in 2001 euros (predicted for non-participants).

** Participants only*

Table B.2: Distributions of Weekly Worked Hours (Selected Samples)

	AT 98	BE 98	BE 01	DK 98	FI 98	FR 98	FR 01	GE 98	GE 01	GR 98	IE 98	IE 01	IT 98
All males													
0 - 4	0.04	0.10	0.08	0.11	0.15	0.09	0.08	0.10	0.10	0.11	0.25	0.11	0.12
5 - 14	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.03	0.00	0.01	0.01	0.01
15 - 24	0.02	0.03	0.04	0.01	0.02	0.03	0.03	0.04	0.03	0.03	0.05	0.06	0.04
25 - 34	0.02	0.04	0.05	0.03	0.05	0.04	0.21	0.12	0.11	0.06	0.07	0.06	0.03
35 - 44	0.72	0.66	0.65	0.69	0.66	0.67	0.51	0.66	0.70	0.59	0.43	0.59	0.66
45 - 54	0.12	0.11	0.13	0.09	0.07	0.12	0.12	0.03	0.02	0.11	0.12	0.13	0.10
55+	0.06	0.05	0.05	0.06	0.04	0.05	0.05	0.03	0.02	0.10	0.08	0.05	0.04
All females													
0 - 4	0.33	0.29	0.23	0.20	0.18	0.30	0.27	0.33	0.28	0.61	0.59	0.35	0.51
5 - 14	0.05	0.04	0.03	0.02	0.01	0.03	0.03	0.07	0.08	0.00	0.04	0.04	0.01
15 - 24	0.17	0.25	0.28	0.07	0.04	0.10	0.10	0.12	0.13	0.04	0.09	0.20	0.10
25 - 34	0.10	0.09	0.12	0.16	0.10	0.11	0.23	0.12	0.12	0.06	0.06	0.10	0.04
35 - 44	0.33	0.31	0.31	0.51	0.64	0.42	0.32	0.35	0.37	0.25	0.19	0.27	0.31
45 - 54	0.02	0.02	0.02	0.03	0.02	0.03	0.04	0.01	0.01	0.03	0.02	0.02	0.02
55+	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01

	NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05	Mean
All males													
0 - 4	0.05	0.06	0.15	0.09	0.19	0.13	0.15	0.08	0.12	0.12	0.17	0.10	0.11
5 - 14	0.01	0.00	0.00	0.02	0.00	0.01	0.05	0.05	0.00	0.01	0.00	0.00	0.01
15 - 24	0.03	0.02	0.02	0.02	0.01	0.02	0.06	0.05	0.02	0.02	0.05	0.01	0.03
25 - 34	0.08	0.10	0.07	0.07	0.05	0.08	0.08	0.09	0.02	0.02	0.00	0.02	0.06
35 - 44	0.67	0.62	0.55	0.61	0.48	0.53	0.56	0.65	0.73	0.67	0.78	0.56	0.62
45 - 54	0.11	0.13	0.13	0.13	0.18	0.16	0.06	0.05	0.07	0.11	0.00	0.20	0.10
55+	0.05	0.07	0.07	0.07	0.09	0.07	0.04	0.04	0.04	0.06	0.00	0.10	0.06
All females													
0 - 4	0.27	0.23	0.60	0.55	0.32	0.27	0.16	0.10	0.14	0.22	0.36	0.26	0.32
5 - 14	0.09	0.02	0.03	0.03	0.08	0.06	0.07	0.07	0.01	0.01	0.00	0.01	0.04
15 - 24	0.22	0.05	0.05	0.05	0.13	0.14	0.11	0.10	0.05	0.05	0.07	0.05	0.11
25 - 34	0.19	0.19	0.08	0.10	0.13	0.17	0.23	0.20	0.04	0.05	0.00	0.07	0.11
35 - 44	0.20	0.44	0.21	0.23	0.29	0.32	0.39	0.47	0.71	0.60	0.57	0.49	0.38
45 - 54	0.02	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.05	0.00	0.09	0.03
55+	0.01	0.04	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.00	0.03	0.01

This table represents the distribution of weekly working hours for our selected samples.

C Estimates of the Wage Equation

As explained in the paper, we first proceed with a Heckman-corrected wage estimation to predict wages for all the individuals in our sample. The wage equation depends on human capital variables: cubic form of age, education and basic family status (men in couple are known to earn more than single men, women with many children have often stopped working so their productivity has decreased). We choose three education groups for comparability purposes (with "low", corresponding to "no education or junior school", as the omitted category); more detailed education groups would be difficult to define in a comparable way across countries. The Heckman selection correction relies on a participation probit which can be seen as a (linearized reduced form) approximation of the extensive margin of the labor supply model, with the somewhat usual exclusion restrictions for identification (see van Soest, 1995). That is, it depends on the same variables plus detailed information about children and "other" incomes. The latter correspond to partner's and other family members' income as well as capital income of various sources. The different income sources have been defined in a harmonized way within the EUROMOD project (see Sutherland, 2007). The assumption of normality of the wage residual is made. The tables below report the results of the Heckman-corrected wage estimations for each country and for men and women separately.

Table C.1: Wage Estimations: Women

	AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
	98	98	01	94	98	95	01	97	00	94	94	00	95
Log Wage													
Age	0.15	0.12	0.13	0.37	0.69	0.12	0.06	0.45	0.45	0.33	0.28	0.10	0.10
	(0.07)	(0.05)	(0.06)	(0.05)	(0.06)	(0.03)	(0.03)	(0.04)	(0.03)	(0.09)	(0.04)	(0.04)	(0.04)
Age square	-0.04	-0.02	-0.03	-0.08	-0.16	-0.02	0.00	-0.10	-0.10	-0.06	-0.06	-0.02	-0.01
	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Age cubic	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.12	0.29	0.31	0.14	0.14	0.36	0.32	0.15	0.25	0.49	0.30	0.19	0.53
	(0.05)	(0.06)	(0.07)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.08)	(0.06)	(0.05)	(0.09)
Educ: High	0.32	0.49	0.58	0.25	0.35	0.93	0.74	0.41	0.48	0.85	0.78	0.51	0.92
	(0.07)	(0.09)	(0.10)	(0.05)	(0.07)	(0.05)	(0.04)	(0.04)	(0.04)	(0.15)	(0.08)	(0.07)	(0.12)
In couple	0.00	0.00	-0.01	0.01	0.07	-0.04	-0.05	-0.05	-0.02	0.06	0.04	0.11	-0.04
	(0.07)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.09)	(0.04)	(0.04)	(0.06)
# children	-0.03	0.02	0.01	-0.06	-0.09	-0.06	-0.05	-0.11	-0.11	-0.02	-0.02	0.01	-0.02
	(0.03)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)
# children 0-2	-0.11	-0.03	0.02	-0.04	-0.30	0.05	0.03	0.24	0.08	0.01	0.07	0.15	-0.03
	(0.11)	(0.03)	(0.04)	(0.05)	(0.05)	(0.02)	(0.03)	(0.10)	(0.10)	(0.09)	(0.04)	(0.04)	(0.04)
constant	2.35	2.29	2.37	-0.71	-5.09	1.76	2.52	-1.84	-1.95	-2.75	-0.09	2.74	1.63
	(0.75)	(0.66)	(0.73)	(0.56)	(0.56)	(0.37)	(0.36)	(0.40)	(0.38)	(1.33)	(0.50)	(0.44)	(0.72)
Participation													
1(children 0-2)	-1.28	-0.44	-0.40	-0.58	-0.57	-0.50	-0.79	-1.76	-1.83	-0.30	-0.45	-0.47	-0.12
	(0.11)	(0.11)	(0.14)	(0.11)	(0.07)	(0.05)	(0.06)	(0.09)	(0.10)	(0.11)	(0.07)	(0.08)	(0.07)
1(children 3-6)	-0.55	-0.24	-0.42	-0.17	-0.25	-0.32	-0.41	-1.05	-1.14	0.01	-0.48	-0.38	-0.06
	(0.10)	(0.09)	(0.11)	(0.10)	(0.06)	(0.05)	(0.05)	(0.07)	(0.07)	(0.08)	(0.06)	(0.08)	(0.06)
1(children 7-12)	-0.34	-0.56	-0.31	0.07	-0.04	-0.30	-0.40	-0.54	-0.49	-0.10	-0.30	-0.26	-0.09
	(0.08)	(0.08)	(0.10)	(0.10)	(0.05)	(0.04)	(0.05)	(0.06)	(0.06)	(0.07)	(0.06)	(0.07)	(0.05)
1(children 13-17)	-0.29	-0.09	-0.39	0.14	-0.10	-0.20	-0.21	-0.10	-0.13	0.03	-0.16	-0.13	-0.21
	(0.08)	(0.08)	(0.09)	(0.11)	(0.05)	(0.04)	(0.05)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.05)
1(children 18+)	-0.01	-0.13	0.20	-0.24	0.07	-0.20	-0.17	-0.09	-0.06	-0.04	-0.05	-0.11	0.03
	(0.12)	(0.09)	(0.11)	(0.23)	(0.10)	(0.06)	(0.06)	(0.10)	(0.11)	(0.08)	(0.08)	(0.08)	(0.05)
Age	-0.23	0.28	0.32	-0.71	-0.37	0.21	0.16	-0.07	0.01	0.26	0.14	-0.09	0.15
	(0.13)	(0.16)	(0.19)	(0.14)	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)	(0.10)	(0.08)	(0.10)	(0.07)
Age square	0.07	-0.05	-0.06	0.19	0.11	-0.03	-0.02	0.03	0.01	-0.04	-0.03	0.03	-0.01
	(0.03)	(0.04)	(0.05)	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Age cubic	-0.01	0.00	0.00	-0.02	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.29	0.87	0.83	0.61	0.20	0.56	0.49	0.34	0.35	0.40	0.66	0.52	0.78
	(0.08)	(0.07)	(0.08)	(0.09)	(0.05)	(0.06)	(0.04)	(0.05)	(0.06)	(0.06)	(0.05)	(0.06)	(0.04)
Educ: High	0.68	1.51	1.56	1.04	0.69	1.24	0.94	0.66	0.72	1.08	1.05	0.97	1.08
	(0.10)	(0.16)	(0.19)	(0.10)	(0.06)	(0.07)	(0.05)	(0.06)	(0.06)	(0.07)	(0.07)	(0.08)	(0.07)
In couple	-0.73	0.00	-0.18	0.39	0.16	-0.31	-0.04	-0.06	-0.02	-0.50	-0.27	-0.45	-0.50
	(0.10)	(0.08)	(0.11)	(0.10)	(0.06)	(0.05)	(0.05)	(0.06)	(0.07)	(0.07)	(0.07)	(0.08)	(0.05)
Other income	-0.01	0.00	0.00	-0.18	-0.01	-0.11	-0.11	-0.25	-0.26	-0.01	-0.14	-0.30	-0.08
	(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.01)	(0.01)	(0.07)	(0.06)	(0.00)	(0.11)	(0.12)	(0.05)
constant	4.16	-4.08	-4.40	8.71	4.83	-2.87	-2.19	1.23	0.39	-4.78	-1.54	1.53	-3.30
	(1.52)	(1.92)	(2.33)	(1.62)	(0.87)	(0.79)	(0.87)	(0.93)	(0.95)	(1.14)	(0.97)	(1.13)	(0.81)
Mills ratio	-0.20	-0.03	-0.02	0.08	-0.46	0.42	0.34	0.08	0.16	0.31	0.08	-0.38	0.32
	(0.16)	(0.13)	(0.14)	(0.10)	(0.24)	(0.07)	(0.07)	(0.07)	(0.07)	(0.21)	(0.12)	(0.13)	(0.19)
# observations	1,763	2,037	1,551	1,835	5,720	7,236	6,276	4,389	3,990	3,123	3,323	2,554	5,196

Note: dummy variables for regions were also included; `other income' corresponds to other household incomes divided by 10,000. Std. errors in brackets.

Table C.2: Wage Estimations: Women (cont.)

	NL	PT	SP	SP	UK	UK	SW	SW	EE	HU	PL	US
	99	00	95	99	96	01	97	01	05	05	05	05
Log Wage												
Age	0.41	-0.16	-.026	-0.03	0.20	0.15	0.00	-0.02	0.07	0.12	0.19	0.25
	(0.05)	(0.06)	(.052)	(0.06)	(0.03)	(0.03)	(0.03)	(0.03)	(0.07)	(0.06)	(0.02)	(0.01)
Age square	-0.09	0.04	.023	0.02	-0.04	-0.02	0.00	0.01	-0.02	-0.02	-0.03	-0.06
	(0.01)	(0.02)	(.014)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.00)
Age cubic	0.01	0.00	-.003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(.001)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.24	0.42	.255	0.32	0.11	0.05	-0.01	0.12	0.26	0.35	0.48	0.17
	(0.06)	(0.06)	(.052)	(0.06)	(0.04)	(0.05)	(0.06)	(0.07)	(0.13)	(0.07)	(0.02)	(0.02)
Educ: High	0.46	0.95	.672	0.72	0.52	0.47	0.14	0.35	0.67	0.95	1.07	0.37
	(0.07)	(0.11)	(.078)	(0.08)	(0.05)	(0.05)	(0.08)	(0.08)	(0.16)	(0.11)	(0.04)	(0.02)
In couple	0.00	0.09	.053	-0.02	-0.03	-0.05	-0.07	-0.01	0.00	-0.05	0.03	-0.02
	(0.03)	(0.04)	(.045)	(0.05)	(0.02)	(0.02)	(0.04)	(0.03)	(0.03)	(0.02)	(0.01)	(0.01)
# children	-0.09	0.04	-.003	-0.03	-0.10	-0.07	0.00	-0.02	-0.04	-0.05	-0.06	-0.05
	(0.02)	(0.02)	(.018)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
# children 0-2	0.21	0.05	.064	0.10	0.09	-0.04	-0.48	-0.49	0.04	-0.10	-0.12	0.12
	(0.04)	(0.04)	(.047)	(0.05)	(0.04)	(0.05)	(0.02)	(0.03)	(0.11)	(0.07)	(0.02)	(0.01)
constant	-1.45	5.00	2.917	3.23	1.17	1.94	4.48	4.56	1.54	0.53	-0.88	0.62
	(0.55)	(0.86)	(.662)	(0.66)	(0.36)	(0.38)	(0.38)	(0.39)	(1.06)	(0.82)	(0.28)	(0.17)
Participation												
1(children 0-2)	-0.27	-0.27	-.279	-0.22	-0.90	-0.88	-0.22	-0.35	-0.55	-0.07	-0.66	-0.39
	(0.09)	(0.08)	(.075)	(0.08)	(0.06)	(0.07)	(0.06)	(0.08)	(0.20)	(0.16)	(0.03)	(0.03)
1(children 3-6)	-0.53	-0.26	-.363	-0.29	-0.60	-0.53	-0.23	-0.32	-0.34	-0.27	-0.30	-0.28
	(0.08)	(0.08)	(.062)	(0.07)	(0.06)	(0.06)	(0.05)	(0.07)	(0.11)	(0.09)	(0.03)	(0.03)
1(children 7-12)	-0.40	-0.23	-.177	-0.36	-0.44	-0.38	-0.13	-0.21	-0.32	-0.17	-0.22	-0.20
	(0.07)	(0.07)	(.052)	(0.06)	(0.06)	(0.06)	(0.05)	(0.06)	(0.10)	(0.07)	(0.02)	(0.03)
1(children 13-17)	-0.14	-0.19	-.144	-0.13	-0.17	-0.23	-0.15	-0.08	-0.09	-0.22	-0.04	-0.05
	(0.08)	(0.06)	(.051)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.08)	(0.07)	(0.02)	(0.03)
1(children 18+)	-0.36	-0.08	-.042	-0.16	-0.34	-0.38	0.00	-0.30	0.01	0.13	0.03	
	(0.14)	(0.08)	(.055)	(0.06)	(0.17)	(0.14)	(0.00)	(0.08)	(0.09)	(0.08)	(0.03)	
Age	-0.13	0.48	.141	-0.04	-0.02	0.00	-0.14	-0.04	0.41	0.28	0.24	0.18
	(0.11)	(0.09)	(.079)	(0.09)	(0.07)	(0.08)	(0.08)	(0.09)	(0.15)	(0.12)	(0.04)	(0.03)
Age square	0.04	-0.11	-.021	0.02	0.02	0.02	0.05	0.02	-0.10	-0.06	-0.04	-0.04
	(0.03)	(0.02)	(.021)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.04)	(0.03)	(0.01)	(0.01)
Age cubic	0.00	0.01	.000	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
	(0.00)	(0.00)	(.002)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.67	0.46	.540	0.49	0.24	0.08	0.76	0.83	0.76	0.55	0.54	0.34
	(0.07)	(0.08)	(.055)	(0.06)	(0.09)	(0.09)	(0.06)	(0.09)	(0.11)	(0.06)	(0.02)	(0.03)
Educ: High	0.95	1.55	1.086	0.92	0.56	0.35	1.17	1.13	1.12	1.19	1.29	0.53
	(0.08)	(0.14)	(.058)	(0.06)	(0.09)	(0.10)	(0.07)	(0.10)	(0.12)	(0.11)	(0.03)	(0.03)
In couple	-0.15	-0.16	-.427	-0.43	0.13	0.06	0.53	0.39	0.16	-0.08	-0.05	0.03
	(0.09)	(0.07)	(.056)	(0.06)	(0.05)	(0.05)	(0.05)	(0.06)	(0.08)	(0.06)	(0.02)	(0.02)
Other income	-0.16	0.00	-.008	-0.52	0.02	0.13	-0.01	-0.04	-0.07	0.00	-0.36	0.04
	(0.08)	(0.00)	(.001)	(0.12)	(0.17)	(0.12)	(0.00)	(0.01)	(0.06)	(0.00)	(0.04)	(0.01)
constant	2.34	-5.67	-2.230	0.20	0.08	0.07	0.94	0.47	-4.84	-3.81	-3.61	-1.71
	(1.33)	(1.01)	(.951)	(1.07)	(0.88)	(0.86)	(0.92)	(1.04)	(1.76)	(1.37)	(0.44)	(0.38)
Mills ratio	-0.10	-0.51	.116	0.30	0.08	0.25	-0.24	0.08	0.23	0.28	0.53	-0.54
	(0.15)	(0.20)	(.118)	(0.13)	(0.09)	(0.11)	(0.17)	(0.19)	(0.30)	(0.24)	(0.06)	(0.09)
# observations	2,715	2,968	4,482	3,559	4,082	3,865	6,672	5,807	1,838	3,075	21,197	24,552

Note: dummy variables for regions were also included; `other income' corresponds to other household incomes divided by 10,000. Std. errors in brackets.

Table C.3: Wage Estimations: Men

	AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
	98	98	01	94	98	95	01	97	00	94	94	00	95
Log Wage													
Age	0.10	0.14	0.03	0.31	0.50	0.18	0.18	0.60	0.47	0.65	0.11	0.15	-0.01
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)	(0.02)	(0.02)	(0.06)	(0.03)	(0.25)	(0.04)	(0.03)	(0.05)
Age square	-0.02	-0.03	0.00	-0.07	-0.12	-0.04	-0.04	-0.14	-0.11	-0.14	-0.01	-0.03	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.06)	(0.01)	(0.01)	(0.01)
Age cubic	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.17	0.18	0.28	0.08	0.12	0.26	0.20	-0.03	0.16	0.38	0.27	0.15	0.29
	(0.07)	(0.04)	(0.03)	(0.05)	(0.03)	(0.03)	(0.02)	(0.06)	(0.04)	(0.10)	(0.07)	(0.04)	(0.02)
Educ: High	0.41	0.41	0.56	0.24	0.36	0.75	0.53	0.10	0.39	0.77	0.64	0.49	0.68
	(0.06)	(0.04)	(0.04)	(0.07)	(0.06)	(0.03)	(0.02)	(0.09)	(0.05)	(0.15)	(0.09)	(0.06)	(0.03)
In couple	0.05	0.04	0.10	0.03	0.06	0.18	0.05	-0.11	0.07	0.61	0.30	0.23	0.01
	(0.05)	(0.04)	(0.04)	(0.05)	(0.08)	(0.03)	(0.03)	(0.08)	(0.03)	(0.24)	(0.08)	(0.06)	(0.06)
# children	-0.01	0.03	0.00	-0.02	-0.03	-0.01	0.02	-0.01	0.00	0.01	-0.01	0.00	-0.03
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)	(0.01)	(0.01)	(0.01)
# children 0-2	-0.02	-0.02	-0.01	0.05	-0.01	-0.01	-0.02	0.11	0.10	-0.01	0.01	0.00	-0.05
	(0.04)	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)	(0.06)	(0.03)	(0.15)	(0.03)	(0.03)	(0.03)
constant	2.96	2.47	3.67	0.34	-2.42	1.14	1.74	-2.94	-2.18	-7.31	1.66	2.17	4.07
	(0.47)	(0.61)	(0.60)	(0.49)	(0.40)	(0.29)	(0.28)	(0.62)	(0.33)	(3.65)	(0.41)	(0.37)	(0.76)
Participation													
1(children 0-2)	-0.02	-0.14	0.21	-0.08	-0.03	-0.14	0.03	-0.23	-0.05	-0.18	-0.16	-0.10	0.12
	(0.20)	(0.16)	(0.24)	(0.14)	(0.09)	(0.07)	(0.10)	(0.10)	(0.12)	(0.16)	(0.09)	(0.14)	(0.10)
1(children 3-6)	0.03	-0.04	-0.02	-0.05	0.02	-0.04	-0.10	-0.08	-0.21	0.08	-0.22	-0.19	-0.16
	(0.18)	(0.14)	(0.17)	(0.13)	(0.08)	(0.07)	(0.09)	(0.09)	(0.10)	(0.12)	(0.08)	(0.13)	(0.08)
1(children 7-12)	0.31	-0.06	-0.20	0.10	-0.01	0.03	-0.26	-0.02	-0.02	0.13	-0.15	-0.07	-0.04
	(0.16)	(0.12)	(0.14)	(0.12)	(0.06)	(0.06)	(0.07)	(0.08)	(0.08)	(0.10)	(0.06)	(0.09)	(0.07)
1(children 13-17)	-0.04	0.03	0.16	-0.01	0.05	-0.11	-0.02	-0.01	0.08	-0.03	-0.01	0.07	-0.14
	(0.13)	(0.13)	(0.15)	(0.12)	(0.06)	(0.06)	(0.07)	(0.08)	(0.08)	(0.09)	(0.06)	(0.08)	(0.06)
1(children 18+)	-0.11	0.36	0.46	-0.18	-0.04	0.04	-0.03	0.12	-0.07	-0.09	0.02	0.00	0.04
	(0.17)	(0.14)	(0.17)	(0.24)	(0.10)	(0.08)	(0.09)	(0.15)	(0.14)	(0.11)	(0.09)	(0.11)	(0.07)
Age	-0.10	0.21	0.03	-0.14	-0.10	-0.10	-0.09	-0.18	-0.03	0.47	-0.15	0.08	0.19
	(0.17)	(0.17)	(0.23)	(0.14)	(0.07)	(0.08)	(0.08)	(0.08)	(0.09)	(0.11)	(0.08)	(0.10)	(0.07)
Age square	0.04	-0.03	0.01	0.04	0.04	0.04	0.05	0.07	0.02	-0.10	0.04	-0.02	-0.03
	(0.04)	(0.04)	(0.06)	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Age cubic	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.01	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.46	0.43	0.33	0.29	0.17	0.18	0.28	0.23	0.31	0.17	0.58	0.50	0.18
	(0.13)	(0.09)	(0.11)	(0.10)	(0.05)	(0.08)	(0.06)	(0.07)	(0.07)	(0.08)	(0.06)	(0.08)	(0.05)
Educ: High	0.34	0.43	0.39	0.46	0.61	0.57	0.44	0.50	0.67	0.55	0.99	0.74	0.12
	(0.15)	(0.16)	(0.19)	(0.11)	(0.06)	(0.10)	(0.08)	(0.08)	(0.09)	(0.10)	(0.09)	(0.11)	(0.08)
In couple	0.29	0.34	0.47	0.34	0.66	0.66	0.62	0.47	0.36	0.74	0.77	0.77	0.70
	(0.15)	(0.11)	(0.13)	(0.10)	(0.06)	(0.06)	(0.07)	(0.07)	(0.08)	(0.11)	(0.09)	(0.11)	(0.07)
Other income	0.00	0.00	-0.01	-0.01	0.01	-0.08	-0.06	-0.19	-0.12	0.00	0.03	-0.20	0.11
	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.09)	(0.08)	(0.00)	(0.12)	(0.19)	(0.06)
constant	1.96	-2.90	-0.03	2.48	1.19	1.24	0.70	2.27	0.62	-6.27	1.75	-0.14	-3.23
	(1.91)	(2.07)	(2.84)	(1.61)	(0.83)	(0.91)	(0.95)	(0.97)	(1.07)	(1.27)	(0.92)	(1.21)	(0.84)
Mills ratio	0.27	-0.40	0.05	-0.24	-0.51	0.32	-0.30	-1.00	-0.03	1.55	0.26	-0.21	-0.40
	(0.52)	(0.22)	(0.21)	(0.41)	(0.29)	(0.14)	(0.13)	(0.48)	(0.24)	(0.70)	(0.21)	(0.23)	(0.21)
# observations	1,682	1,923	1,474	1,760	5,684	6,408	5,645	3,999	3,710	2,174	2,818	2,219	4,709

Note: dummy variables for regions were also included; `other income' corresponds to other household incomes divided by 10,000. Std. errors in brackets.

Table C.4: Wage Estimations: Men (cont.)

	NL	PT	SP	SP	UK	UK	SW	SW	EE	HU	PL	US
	99	00	95	99	96	01	97	01	05	05	05	05
Log Wage												
Age	0.37	0.14	.041	-0.12	0.20	0.12	0.07	0.00	-0.09	0.09	0.18	0.20
	(0.04)	(0.05)	(.038)	(0.05)	(0.04)	(0.03)	(0.03)	(0.03)	(0.08)	(0.05)	(0.02)	(0.01)
Age square	-0.08	-0.03	.003	0.04	-0.04	-0.02	-0.01	0.00	0.02	-0.02	-0.03	-0.04
	(0.01)	(0.01)	(.010)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.00)
Age cubic	0.01	0.00	-.001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(.001)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.16	0.34	.294	0.28	0.09	0.09	0.18	0.24	0.11	0.03	0.32	0.32
	(0.02)	(0.03)	(.026)	(0.04)	(0.05)	(0.05)	(0.04)	(0.05)	(0.08)	(0.08)	(0.02)	(0.02)
Educ: High	0.44	1.08	.611	0.55	0.39	0.52	0.46	0.55	0.41	0.67	0.84	0.57
	(0.03)	(0.05)	(.031)	(0.04)	(0.06)	(0.07)	(0.05)	(0.05)	(0.13)	(0.11)	(0.03)	(0.03)
In couple	0.10	0.26	.251	0.30	0.03	0.18	0.16	0.25	0.15	0.04	0.55	0.22
	(0.03)	(0.05)	(.052)	(0.06)	(0.05)	(0.06)	(0.07)	(0.06)	(0.10)	(0.05)	(0.03)	(0.02)
# children	0.02	-0.03	-.020	-0.02	0.00	-0.02	-0.01	-0.03	0.02	-0.01	-0.02	-0.01
	(0.01)	(0.01)	(.011)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.00)
# children 0-2	0.01	0.01	.033	0.00	0.10	0.01	-0.04	-0.02	-0.01	0.00	0.01	0.00
	(0.02)	(0.04)	(.032)	(0.04)	(0.03)	(0.04)	(0.02)	(0.03)	(0.06)	(0.04)	(0.01)	(0.01)
constant	-0.97	1.04	2.171	4.27	1.41	2.25	3.12	4.00	4.15	1.55	-0.61	0.77
	(0.42)	(0.63)	(.519)	(0.57)	(0.41)	(0.39)	(0.30)	(0.38)	(1.01)	(0.75)	(0.27)	(0.18)
Participation												
1(children 0-2)	0.07	0.04	-.143	-0.22	-0.26	-0.40	-0.26	-0.24	-0.09	-0.05	0.00	-0.09
	(0.16)	(0.14)	(.090)	(0.11)	(0.08)	(0.09)	(0.07)	(0.10)	(0.15)	(0.10)	(0.04)	(0.03)
1(children 3-6)	-0.33	-0.41	-.072	-0.17	-0.20	-0.14	-0.04	-0.25	-0.04	-0.24	0.05	-0.06
	(0.14)	(0.12)	(.077)	(0.10)	(0.08)	(0.09)	(0.06)	(0.09)	(0.13)	(0.09)	(0.03)	(0.03)
1(children 7-12)	0.12	-0.16	-.020	-0.05	-0.14	-0.18	-0.22	-0.07	-0.09	-0.01	0.02	-0.13
	(0.14)	(0.10)	(.062)	(0.09)	(0.07)	(0.08)	(0.06)	(0.07)	(0.11)	(0.08)	(0.03)	(0.03)
1(children 13-17)	-0.09	0.03	-.053	0.12	-0.05	-0.17	-0.13	-0.15	-0.19	-0.03	-0.02	-0.02
	(0.14)	(0.09)	(.058)	(0.08)	(0.07)	(0.07)	(0.07)	(0.07)	(0.09)	(0.08)	(0.03)	(0.03)
1(children 18+)	0.23	0.01	.100	0.06	0.03	0.07	-0.18	-0.22	0.22	0.22	0.08	
	(0.28)	(0.11)	(.061)	(0.08)	(0.22)	(0.19)	(0.07)	(0.09)	(0.10)	(0.09)	(0.03)	
Age	-0.71	0.59	.209	-0.05	-0.04	0.00	0.05	-0.33	0.35	0.36	0.04	0.11
	(0.16)	(0.11)	(.075)	(0.10)	(0.08)	(0.09)	(0.02)	(0.09)	(0.13)	(0.10)	(0.04)	(0.03)
Age square	0.20	-0.14	-.041	0.03	0.02	0.01	0.00	0.09	-0.09	-0.09	0.01	-0.02
	(0.04)	(0.03)	(.020)	(0.03)	(0.02)	(0.02)	(0.00)	(0.02)	(0.03)	(0.03)	(0.01)	(0.01)
Age cubic	-0.02	0.01	.002	0.00	0.00	0.00	0.45	-0.01	0.01	0.01	0.00	0.00
	(0.00)	(0.00)	(.002)	(0.00)	(0.00)	(0.00)	(0.07)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Educ: middle	0.24	-0.12	.169	0.20	0.15	0.20	0.73	0.45	0.42	0.65	0.33	0.31
	(0.11)	(0.10)	(.061)	(0.08)	(0.11)	(0.11)	(0.07)	(0.10)	(0.10)	(0.07)	(0.02)	(0.03)
Educ: High	0.38	0.63	.492	0.46	0.29	0.43	1.00	0.55	0.92	1.21	0.80	0.62
	(0.12)	(0.21)	(.067)	(0.08)	(0.11)	(0.11)	(0.05)	(0.10)	(0.15)	(0.12)	(0.04)	(0.03)
In couple	0.49	0.99	.704	0.72	0.57	0.49	-0.01	0.97	0.61	0.43	0.82	0.43
	(0.13)	(0.10)	(.066)	(0.08)	(0.07)	(0.07)	(0.01)	(0.07)	(0.11)	(0.07)	(0.03)	(0.03)
Other income	-0.80	-0.01	-.010	-1.19	1.26	-0.09	1.93	-0.07	0.15	0.01	-0.43	0.03
	(0.12)	(0.00)	(.002)	(0.23)	(0.30)	(0.22)	(0.90)	(0.01)	(0.07)	(0.00)	(0.06)	(0.01)
constant	9.51	-6.30	-2.672	0.71	0.22	0.41	0.00	4.59	-3.96	-4.24	-1.08	-0.96
	(1.93)	(1.20)	(.869)	(1.13)	(0.99)	(1.00)	(0.00)	(1.07)	(1.50)	(1.23)	(0.44)	(0.36)
Mills ratio	0.06	0.49	.398	0.71	-0.48	-0.03	0.00	0.67	-0.62	-0.54	0.60	0.12
	(0.13)	(0.18)	(.131)	(0.20)	(0.18)	(0.34)	(0.00)	(0.20)	(0.33)	(0.24)	(0.09)	(0.15)
# observations	2,544	2,597	4,004	3,148	3,335	3,198	6,746	5,865	1,632	3,146	19,146	29,182

Note: dummy variables for regions were also included; `other income' corresponds to other household incomes divided by 10,000. Std. errors in brackets.

D Labor Supply Model: Estimates

In Tables D.1-D.8, we report the maximum-likelihood estimates of the 7-discrete-choice model of labor supply. Estimations are conducted for each country separately but with the same specification (except the "region" variable which is country-specific). Estimations are also carried out for couples, single men and single women separately. We report the estimates for each individual year, as used to calculate baseline elasticities. In the paper (robustness checks of Section 4.3), we verify the sensitivity of our results to estimating the model on two-year pooled samples, corresponding to a period characterized by significant policy reforms. The variable "region" corresponds to broad regional categories (for instance, Paris region versus the rest of France), so it does not compromise the identification of the model based on thinner regional variation in tax-benefit rules. Broad regional information is missing in our samples for Denmark and the Netherlands. The variable "elderly", i.e. the presence of dependent parents aged 70 or above, is also ignored in the specification for Danish couples and Swedish single men since the selected samples for these groups contained almost no such observations.

Note that the minimal consistency requirement in our model, i.e. that marginal utility of consumption be positive, is directly imposed as a constraint in the likelihood minimization. We do so by choosing the smallest Lagrangian multiplier that reaches the target, i.e. at least 95% of the observations with no negative marginal utility of income at all potential labor supply choices. The remaining observations, less than 5% of the samples, are simply discarded before we calculate elasticities. In practice, we obtain very small left-over, as a target of more than 99% is achieved for most countries and demographic groups (detailed results are available from the authors).

To summarize results concerning our model estimations, we can say that parameter estimates are broadly in line with usual findings. As expected, the presence of children significantly decreases the propensity to work for women (both women in couples and single mothers) in most countries. Taste shifters related to age are often significant for women in couples but not systematically for other demographic groups. The constant of the cost of work is significantly positive for all groups. The presence of young children most often has a significantly positive impact on the work cost of women. For single men and women, higher education leads to lower costs which can be interpreted as demand-side constraints in the form of lower search costs (see van Soest and Das, 2001).

Table D.1: Labor Supply Estimations: Couples (1/4)

Coeff.	AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
	98	98	01	98	98	98	01	98	01	98	98	01	98
income^2 / 10,000	0.002	0.021	0.004	0.025	0.000	-0.002	0.005	-0.034	-0.013	0.115	-0.007	-0.010	0.007
	(.009)	(.011)	(.014)	(.009)	(.008)	(.003)	(.004)	(.007)	(.005)	(.020)	(.009)	(.005)	(.008)
hm^2	-7.808	-8.751	-8.357	-9.467	-10.331	-8.973	-6.869	-9.220	-9.712	-5.728	-3.821	-6.324	-8.193
	(.433)	(.383)	(.428)	(.468)	(.283)	(.210)	(.181)	(.275)	(.308)	(.305)	(.237)	(.324)	(.286)
hf^2	-3.815	-5.126	-5.080	-6.805	-9.757	-4.836	-5.144	-3.833	-3.610	-6.834	-3.079	-4.114	-5.074
	(.293)	(.255)	(.291)	(.358)	(.272)	(.140)	(.154)	(.155)	(.152)	(.491)	(.251)	(.271)	(.243)
hm x income /1,000	-0.061	-0.068	-0.056	-0.128	-0.077	-0.028	-0.035	-0.050	-0.084	-0.216	-0.136	-0.023	-0.114
	(.027)	(.019)	(.027)	(.022)	(.015)	(.007)	(.010)	(.014)	(.014)	(.028)	(.018)	(.015)	(.016)
hf x income /1,000	-0.041	-0.046	-0.023	-0.103	-0.062	-0.026	-0.030	-0.023	-0.037	-0.120	-0.038	-0.009	-0.005
	(.017)	(.016)	(.023)	(.018)	(.012)	(.005)	(.007)	(.011)	(.010)	(.022)	(.015)	(.013)	(.014)
hm x hf /1,000	0.919	0.935	0.932	2.119	1.080	0.546	0.460	1.061	1.456	0.870	2.083	0.697	0.936
	(.289)	(.178)	(.265)	(.225)	(.115)	(.086)	(.105)	(.146)	(.164)	(.169)	(.169)	(.212)	(.146)
income	-0.027	0.023	0.016	0.001	0.017	0.008	-0.004	0.011	0.008	0.002	0.032	0.025	0.031
	(.010)	(.009)	(.010)	(.007)	(.005)	(.003)	(.004)	(.005)	(.006)	(.011)	(.008)	(.007)	(.009)
x spouses' mean age/10	0.018	-0.007	-0.003	0.004	-0.007	-0.002	0.003	0.001	0.003	0.003	-0.011	-0.008	-0.010
	(.005)	(.005)	(.005)	(.004)	(.003)	(.002)	(.002)	(.003)	(.003)	(.005)	(.004)	(.003)	(.004)
x spouses' mean age^2 /100	-0.002	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	-0.001	0.001	0.001	0.001
	(.001)	(.001)	(.001)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)	(.000)	(.000)
# children	-0.002	-0.001	-0.001	0.000	0.001	0.000	-0.001	-0.002	-0.001	0.001	0.001	0.000	-0.001
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)	(.000)	(.000)
hm	0.874	0.472	0.551	0.709	0.667	0.555	0.392	0.582	0.640	0.545	0.206	0.237	0.589
	(.100)	(.069)	(.086)	(.069)	(.038)	(.032)	(.034)	(.045)	(.052)	(.067)	(.054)	(.073)	(.063)
x male age/10	-0.119	0.123	0.048	0.034	0.099	0.088	0.085	0.039	0.033	-0.008	0.068	0.134	0.038
	(.046)	(.031)	(.039)	(.032)	(.016)	(.014)	(.016)	(.020)	(.023)	(.030)	(.026)	(.033)	(.028)
x male age^2 /100	0.012	-0.015	-0.006	-0.005	-0.014	-0.011	-0.012	-0.006	-0.005	0.001	-0.009	-0.016	-0.004
	(.005)	(.004)	(.005)	(.004)	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)	(.003)	(.004)	(.003)
# children	0.020	0.003	0.014	0.013	0.004	0.001	0.001	0.030	0.021	-0.005	0.000	-0.009	0.008
	(.006)	(.005)	(.005)	(.006)	(.003)	(.002)	(.002)	(.003)	(.004)	(.005)	(.003)	(.004)	(.004)
x 1(region) §	0.004	-0.022	-0.018		0.012	0.003	0.015	0.013	-0.005	0.013	-0.013	-0.012	-0.020
	(.006)	(.007)	(.010)		(.003)	(.004)	(.004)	(.004)	(.004)	(.004)	(.003)	(.005)	(.003)

Table D.2: Labor Supply Estimations: Couples (2/4)

Coeff.	AT 98	BE 98	BE 01	DK 94	FI 98	FR 95	FR 01	GE 97	GE 00	GR 94	IE 94	IE 00	IT 95
hf	0.300	0.181	0.081	0.355	0.555	0.129	0.207	0.172	0.187	0.352	-0.039	-0.047	0.146
	(.073)	(.054)	(.066)	(.055)	(.032)	(.025)	(.028)	(.032)	(.036)	(.057)	(.053)	(.067)	(.048)
x female age/10	-0.015	0.094	0.126	0.060	0.099	0.107	0.078	0.029	0.010	0.073	0.111	0.158	0.089
	(.035)	(.026)	(.033)	(.028)	(.014)	(.013)	(.014)	(.016)	(.018)	(.023)	(.027)	(.033)	(.023)
x female age² /100	-0.002	-0.014	-0.018	-0.010	-0.014	-0.015	-0.011	-0.006	-0.004	-0.009	-0.018	-0.021	-0.012
	(.004)	(.003)	(.004)	(.004)	(.002)	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)	(.004)	(.003)
x 1(children 0-2)	-0.009	-0.015	0.004	0.014	0.001	-0.001	-0.004	-0.034	-0.067	-0.011	-0.010	-0.036	-0.005
	(.019)	(.010)	(.011)	(.011)	(.009)	(.005)	(.006)	(.010)	(.011)	(.020)	(.009)	(.010)	(.010)
x 1(children 3-6)	-0.040	-0.016	-0.021	-0.008	-0.012	-0.008	-0.012	-0.067	-0.068	0.004	-0.035	-0.036	0.000
	(.007)	(.005)	(.006)	(.006)	(.004)	(.002)	(.003)	(.005)	(.005)	(.005)	(.005)	(.006)	(.003)
x 1(children 7-12)	-0.032	-0.025	-0.024	0.000	-0.004	-0.008	-0.013	-0.035	-0.051	-0.003	-0.038	-0.033	-0.001
	(.006)	(.005)	(.006)	(.006)	(.004)	(.002)	(.003)	(.004)	(.004)	(.004)	(.005)	(.005)	(.003)
x 1(children 13-17)	-0.022	-0.007	-0.029	0.001	-0.008	-0.003	-0.008	-0.007	-0.010	0.009	-0.016	-0.021	0.002
	(.006)	(.005)	(.006)	(.007)	(.004)	(.003)	(.003)	(.004)	(.004)	(.005)	(.005)	(.006)	(.003)
x 1(elderly)	0.016	-0.009	0.000		0.026	0.000	-0.013	0.018	-0.028	0.014	0.004	0.010	-0.002
	(.011)	(.020)	(.024)		(.022)	(.009)	(.012)	(.012)	(.014)	(.007)	(.011)	(.014)	(.006)
x 1(region) §	-0.014	0.014	0.013		0.016	0.016	0.018	0.024	0.029	0.008	-0.002	-0.006	-0.027
	(.005)	(.007)	(.008)		(.003)	(.003)	(.003)	(.003)	(.004)	(.003)	(.004)	(.004)	(.003)
fixed cost for male labour	11.951	13.882	12.730	15.586	16.090	13.310	8.990	11.943	12.897	10.157	7.638	10.319	13.098
	(.783)	(.692)	(.724)	(.815)	(.472)	(.372)	(.297)	(.403)	(.457)	(.606)	(.436)	(.602)	(.527)
# children	-0.288	-0.089	-0.142	0.415	0.085	-0.003	-0.084	0.477	0.356	-0.221	0.088	-0.306	0.141
	(.269)	(.165)	(.204)	(.214)	(.111)	(.089)	(.087)	(.120)	(.124)	(.192)	(.091)	(.127)	(.142)
x 1(children 0-2)	-0.521	-0.180	-1.072	-0.947	-0.439	-0.057	-0.673	-0.148	-0.474	0.317	0.191	-0.796	-0.429
	(.831)	(.353)	(.644)	(.368)	(.211)	(.161)	(.236)	(.254)	(.327)	(.366)	(.184)	(.366)	(.253)
fixed cost for female labour	4.209	5.900	5.427	8.324	12.743	5.532	5.065	4.057	3.718	10.092	3.818	4.260	6.758
	(.338)	(.333)	(.357)	(.481)	(.394)	(.181)	(.186)	(.176)	(.176)	(.674)	(.284)	(.328)	(.323)
# children	-0.301	-0.187	-0.237	0.022	0.187	0.286	0.220	-0.255	-0.425	0.372	0.071	0.030	0.177
	(.118)	(.097)	(.111)	(.130)	(.074)	(.047)	(.052)	(.063)	(.062)	(.135)	(.067)	(.086)	(.090)
x 1(children 0-2)	1.798	0.052	0.800	1.166	0.961	0.469	0.818	1.290	0.691	-0.312	0.550	0.087	0.232
	(.596)	(.368)	(.409)	(.448)	(.341)	(.191)	(.202)	(.315)	(.306)	(.715)	(.294)	(.323)	(.343)
Nb of observations	928	1,332	1,024	1,169	3,351	4,463	3,851	2,927	2,675	1,192	1,508	1,123	2,271
Log-Likelihood	-2491	-3722	-2874	-2952	-8349	-12443	-11159	-7806	-7138	-2980	-3925	-3207	-5832
pseudo-R2	0.31	0.28	0.28	0.35	0.36	0.28	0.26	0.31	0.31	0.36	0.33	0.27	0.34

§ Region dummy corresponds to Wienna & Niederoesterreich, Brussels, Helsinki, Paris region, East Germany, Dublin, Southern Italy (n.a. for Denmark). Std. errors in brackets.

Table D.3: Labor Supply Estimations: Couples (3/4)

Coeff.	NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05
income² / 10,000	0.022	0.035	0.078	0.051	0.001	0.003	-0.069	-0.034	-0.023	-0.116	-0.021	-0.001
	(.008)	(.010)	(.009)	(.007)	(.004)	(.003)	(.007)	(.004)	(.054)	(.065)	(.004)	(.000)
hm²	-7.730	-7.847	-6.165	-6.025	-6.489	-6.378	-5.875	-7.319	-14.578	-9.997	-20.452	-8.684
	(.328)	(.335)	(.246)	(.255)	(.270)	(.269)	(.141)	(.171)	(.690)	(.384)	(.276)	(.088)
hf²	-4.057	-6.991	-3.637	-4.421	-3.285	-3.995	-4.688	-4.757	-9.710	-7.766	-14.287	-5.879
	(.227)	(.312)	(.227)	(.274)	(.163)	(.184)	(.117)	(.117)	(.493)	(.323)	(.246)	(.068)
hm x income /1,000	-0.152	-0.144	-0.199	-0.149	-0.073	-0.082	-0.004	0.006	-0.084	-0.088	-0.028	0.016
	(.019)	(.019)	(.016)	(.016)	(.011)	(.010)	(.013)	(.010)	(.052)	(.039)	(.009)	(.001)
hf x income /1,000	-0.060	-0.025	-0.101	-0.053	-0.016	-0.031	-0.001	0.007	-0.058	0.069	0.072	0.003
	(.016)	(.014)	(.014)	(.012)	(.008)	(.007)	(.011)	(.008)	(.035)	(.035)	(.009)	(.000)
hm x hf /1,000	0.936	1.079	1.277	1.033	0.927	1.327	0.899	0.997	0.401	0.396	-0.017	-0.145
	(.233)	(.160)	(.137)	(.159)	(.116)	(.134)	(.105)	(.118)	(.188)	(.123)	(.045)	(.028)
income	-0.024	-0.013	0.007	-0.003	0.005	-0.003	-0.005	-0.007	0.000	0.006	0.010	0.003
	(.006)	(.012)	(.008)	(.008)	(.004)	(.004)	(.004)	(.004)	(.028)	(.027)	(.006)	(.001)
x spouses' mean age/10	0.016	0.009	-0.001	0.003	0.001	0.004	0.007	0.005	0.007	0.006	-0.003	-0.001
	(.003)	(.006)	(.004)	(.004)	(.002)	(.002)	(.002)	(.002)	(.014)	(.014)	(.003)	(.000)
x spouses' mean age² /100	-0.002	-0.001	0.000	0.000	0.000	-0.001	-0.001	0.000	-0.001	-0.001	0.001	0.000
	(.000)	(.001)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.002)	(.002)	(.000)	(.000)
# children	-0.002	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.001	-0.001	-0.001	0.000
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.001)	(.001)	(.000)	(.000)
hm	0.777	0.668	0.528	0.440	0.509	0.572	0.407	0.514	1.270	0.858	1.441	0.627
	(.066)	(.066)	(.052)	(.063)	(.038)	(.044)	(.029)	(.038)	(.091)	(.057)	(.027)	(.012)
x male age/10	-0.047	0.012	0.019	0.056	0.034	-0.007	0.006	0.009	-0.036	-0.018	0.081	0.050
	(.032)	(.029)	(.024)	(.029)	(.016)	(.020)	(.014)	(.018)	(.034)	(.024)	(.008)	(.005)
x male age² /100	0.004	-0.003	-0.003	-0.007	-0.004	0.001	-0.002	-0.003	0.004	0.002	-0.012	-0.007
	(.004)	(.003)	(.003)	(.003)	(.002)	(.002)	(.002)	(.002)	(.004)	(.003)	(.001)	(.001)
# children	0.025	-0.002	0.004	-0.001	0.007	0.009	0.003	0.003	0.000	0.001	0.004	0.003
	(.004)	(.003)	(.004)	(.004)	(.003)	(.003)	(.002)	(.002)	(.007)	(.004)	(.002)	(.001)
x 1(region) §		-0.001	0.005	0.009	-0.006	0.000	-0.004	0.006	0.001	0.023	0.002	0.005
		(.005)	(.003)	(.004)	(.005)	(.005)	(.003)	(.004)	(.006)	(.005)	(.002)	(.001)

Table D.4: Labor Supply Estimations: Couples (4/4)

Coeff.	NL 99	PT 00	SP 95	SP 99	UK 96	UK 01	SW 97	SW 01	EE 05	HU 05	PL 05	US 05
hf	0.327	0.507	0.125	0.227	0.122	0.196	0.131	0.148	0.670	0.512	0.878	0.377
	(.052)	(.050)	(.045)	(.055)	(.033)	(.037)	(.026)	(.029)	(.065)	(.048)	(.025)	(.009)
x female age/10	-0.026	0.008	0.076	0.045	0.046	0.039	0.068	0.076	0.030	0.026	0.109	0.040
	(.027)	(.022)	(.022)	(.026)	(.017)	(.019)	(.014)	(.015)	(.027)	(.022)	(.009)	(.004)
x female age² /100	-0.002	-0.004	-0.011	-0.008	-0.007	-0.007	-0.009	-0.011	-0.002	-0.003	-0.015	-0.005
	(.003)	(.003)	(.003)	(.003)	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)	(.001)	(.000)
x 1(children 0-2)	-0.065	-0.027	-0.046	-0.021	-0.040	-0.070	0.015	-0.026	-0.136	-0.051	-0.006	-0.018
	(.008)	(.013)	(.009)	(.011)	(.007)	(.009)	(.005)	(.005)	(.036)	(.014)	(.007)	(.003)
x 1(children 3-6)	-0.039	-0.017	-0.013	-0.006	-0.044	-0.038	0.001	-0.018	-0.014	-0.018	-0.009	-0.018
	(.006)	(.005)	(.003)	(.004)	(.005)	(.005)	(.003)	(.003)	(.007)	(.004)	(.002)	(.001)
x 1(children 7-12)	-0.031	-0.006	-0.003	-0.019	-0.035	-0.036	0.001	-0.023	0.005	-0.007	-0.010	-0.012
	(.006)	(.004)	(.003)	(.004)	(.004)	(.005)	(.004)	(.003)	(.006)	(.004)	(.001)	(.001)
x 1(children 13-17)	-0.007	-0.007	-0.010	-0.001	-0.010	-0.014	0.003	-0.011	-0.001	-0.001	0.001	-0.005
	(.006)	(.004)	(.004)	(.004)	(.004)	(.005)	(.004)	(.003)	(.006)	(.004)	(.001)	(.001)
x 1(elderly)	-0.022	-0.003	-0.002	-0.008	0.009	0.009	-0.014	0.029	-0.011	0.001	-0.004	-0.006
	(.065)	(.006)	(.006)	(.006)	(.015)	(.013)	(.003)	(.030)	(.010)	(.006)	(.002)	(.003)
x 1(region) §		0.000	0.015	0.015	-0.003	-0.015	0.018	0.010	-0.001	0.006	0.007	0.006
		(.004)	(.003)	(.003)	(.005)	(.005)	(.003)	(.003)	(.006)	(.004)	(.001)	(.001)
fixed cost for male labour	11.641	12.922	11.256	10.382	12.081	11.008	7.340	8.581	22.788	16.312	28.615	14.444
	(.547)	(.655)	(.484)	(.496)	(.520)	(.496)	(.222)	(.271)	(1.210)	(.723)	(.416)	(.172)
# children	0.442	-0.570	-0.047	-0.377	0.267	0.292	0.044	0.275	0.079	0.002	0.196	0.027
	(.165)	(.172)	(.131)	(.135)	(.134)	(.133)	(.074)	(.086)	(.263)	(.165)	(.081)	(.039)
x 1(children 0-2)	0.027	-2.582	0.429	0.260	0.182	-0.127	-0.008	-0.308	0.637	-0.546	-0.137	-0.034
	(.331)	(1.541)	(.190)	(.325)	(.176)	(.216)	(.145)	(.189)	(.528)	(.269)	(.104)	(.077)
fixed cost for female labour	3.008	8.462	6.020	6.050	3.115	3.857	4.009	3.880	13.328	10.614	19.963	8.487
	(.210)	(.448)	(.313)	(.347)	(.194)	(.224)	(.151)	(.166)	(.776)	(.512)	(.357)	(.106)
# children	-0.208	0.273	0.112	0.289	-0.118	-0.195	-0.100	0.039	0.133	0.172	0.190	0.008
	(.075)	(.083)	(.084)	(.086)	(.069)	(.074)	(.056)	(.059)	(.140)	(.100)	(.034)	(.021)
x 1(children 0-2)	-1.229	-0.299	-1.197	-0.644	0.365	-0.247	0.689	0.102	-2.744	-0.090	0.800	0.216
	(.224)	(.492)	(.306)	(.402)	(.233)	(.258)	(.167)	(.177)	(1.212)	(.519)	(.285)	(.100)
Nb of observations	1,806	1,364	2,189	1,742	2,020	1,849	5,551	4,787	917	1,619	10,361	23,116
Log-Likelihood	-4900	-3687	-5631	-4413	-6125	-5521	-16350	-13796	-2195	-4229	-22155	-64790
pseudo-R2	0.30	0.31	0.34	0.35	0.22	0.23	0.24	0.26	0.38	0.33	0.45	0.28

§ Region dummy corresponds to Lisboa, Catalunya, London, Stockholm, Tallin, Budapest region, Warsaw region, US metropolitain areas (n.a. for the Netherlands). Std. errors in brackets.

Table D.5: Labor Supply Estimations: Single Women

Coeff.	AT 98	BE 98	BE 01	DK 98	FI 98	FR 98	FR 01	GE 98	GE 01	GR 98	IE 98	IE 01	IT 98
income² / 10,000	-0.058	0.007	-0.073	-0.040	-0.150	-0.072	-0.061	-0.097	-0.050	-0.041	-0.242	-0.125	-0.087
	(.051)	(.050)	(.071)	(.040)	(.043)	(.017)	(.017)	(.031)	(.033)	(.130)	(.070)	(.032)	(.036)
hours² / 1,000	-0.092	-0.269	-0.099	-0.320	0.035	-0.015	0.014	-0.056	-0.108	-0.171	0.156	0.144	0.046
	(.074)	(.079)	(.099)	(.065)	(.046)	(.024)	(.027)	(.052)	(.056)	(.104)	(.071)	(.056)	(.048)
hours x income / 1,000	-0.092	-0.269	-0.099	-0.320	0.035	-0.015	0.014	-0.056	-0.108	-0.171	0.156	0.144	0.046
	(.074)	(.079)	(.099)	(.065)	(.046)	(.024)	(.027)	(.052)	(.056)	(.104)	(.071)	(.056)	(.048)
income	-0.045	0.021	0.098	-0.033	-0.020	-0.015	0.014	-0.021	-0.020	-0.034	0.021	0.012	-0.049
	(.027)	(.030)	(.047)	(.015)	(.013)	(.011)	(.010)	(.013)	(.014)	(.043)	(.034)	(.022)	(.033)
x age/10	0.026	-0.002	-0.036	0.028	0.015	0.012	-0.004	0.017	0.016	0.019	-0.002	-0.001	0.024
	(.013)	(.015)	(.022)	(.009)	(.007)	(.006)	(.005)	(.007)	(.007)	(.022)	(.018)	(.011)	(.016)
x age² /100	-0.003	0.000	0.004	-0.003	-0.002	-0.001	0.000	-0.002	-0.002	-0.002	0.000	0.000	-0.003
	(.001)	(.002)	(.003)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.003)	(.002)	(.001)	(.002)
x # children	-0.001	0.000	-0.003	0.003	0.001	0.000	0.000	-0.004	-0.002	0.002	0.001	0.001	-0.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.002)	(.001)	(.001)	(.001)
hours	0.526	0.138	-0.059	0.457	0.856	0.254	0.152	0.422	0.324	0.562	0.300	0.138	0.644
	(.179)	(.124)	(.219)	(.104)	(.075)	(.055)	(.045)	(.072)	(.081)	(.142)	(.168)	(.163)	(.176)
x age/10	-0.080	0.061	0.212	-0.069	-0.011	0.064	0.125	-0.030	-0.005	0.014	0.000	0.025	-0.122
	(.084)	(.063)	(.110)	(.061)	(.031)	(.027)	(.022)	(.037)	(.041)	(.067)	(.085)	(.087)	(.085)
x age² /100	0.007	-0.009	-0.029	0.007	0.000	-0.009	-0.016	0.001	-0.002	-0.006	0.000	-0.007	0.014
	(.010)	(.008)	(.013)	(.008)	(.004)	(.003)	(.003)	(.005)	(.005)	(.008)	(.011)	(.011)	(.010)
x 1(children 0-2)	-0.045	0.066	0.099	0.036	-0.028	-0.030	-0.009	-0.136	-0.098	0.003	-0.273	-0.020	-0.089
	(.059)	(.064)	(.064)	(.035)	(.051)	(.021)	(.024)	(.061)	(.055)	(.118)	(.148)	(.031)	(.127)
x 1(children 3-6)	-0.013	-0.029	-0.043	0.025	-0.017	-0.011	-0.016	-0.068	-0.085	-0.031	-0.077	-0.025	0.017
	(.020)	(.018)	(.018)	(.016)	(.010)	(.008)	(.008)	(.011)	(.013)	(.019)	(.028)	(.016)	(.018)
x 1(elderly)	0.036	0.015	0.021	0.057	-0.025	0.009	-0.012	0.013	-0.033	0.002	0.012	0.012	-0.001
	(.029)	(.021)	(.027)	(.079)	(.020)	(.009)	(.010)	(.016)	(.018)	(.010)	(.015)	(.018)	(.008)
x 1(region) §	-0.007	0.027	-0.008		0.026	0.024	0.019	0.001	0.005	0.002	0.018	0.007	-0.021
	(.011)	(.012)	(.013)		(.006)	(.007)	(.006)	(.007)	(.007)	(.007)	(.012)	(.010)	(.007)
fixed cost	4.727	4.712	5.503	7.155	15.717	6.539	6.127	6.469	5.450	11.264	8.396	3.637	8.149
	(.914)	(.535)	(.735)	(.757)	(.992)	(.463)	(.367)	(.430)	(.430)	(1.313)	(1.144)	(.633)	(.672)
x # children	-0.230	-0.652	-0.552	-0.636	-0.121	0.180	0.327	-0.567	-0.001	0.071	0.094	-0.008	-0.426
	(.327)	(.220)	(.280)	(.349)	(.216)	(.117)	(.114)	(.180)	(.193)	(.298)	(.311)	(.248)	(.251)
x 1(children 0-2)	-0.273	4.063	4.745	3.140	0.402	-0.172	1.317	-0.135	-0.253	2.027	-3.703	2.732	-0.778
	(1.950)	(2.270)	(2.651)	(1.527)	(1.910)	(.754)	(.857)	(1.401)	(1.367)	(4.849)	(2.616)	(1.056)	(3.798)
x high educ.	0.278	-0.550	-0.132	-0.548	-0.378	-0.867	-0.845	-0.083	-0.518	-0.194	-1.454	-1.125	-2.029
	(.559)	(.315)	(.400)	(.403)	(.239)	(.306)	(.182)	(.219)	(.263)	(.363)	(.521)	(.470)	(.330)
Nb of observations	217	334	249	392	738	1118	1167	906	813	291	202	220	409
Log-Likelihood	-333	-488	-353	-491	-915	-1677	-1733	-1265	-1169	-341	-220	-333	-620
pseudo-R2	0.21	0.25	0.27	0.36	0.36	0.23	0.24	0.28	0.26	0.40	0.44	0.22	0.22

‘*Note: Region dummy corresponds to Wienna & Niederoesterreich, Brussels, Helsinki, Paris region, East Germany, Dublin, Southern Italy. Region not available for Denmark. Std. errors in brackets.*

Table D.6: Labor Supply Estimations: Single Women (cont.)

Coeff.	NL	PT	SP	SP	UK	UK	SW	SW	EE	HU	PL	US
	01	01	98	01	98	01	98	01	05	05	05	05
income² / 10,000	0.027	0.151	0.027	0.081	-0.061	-0.043	-0.128	-0.099	0.331	0.101	-0.014	-0.006
	(.033)	(.040)	(.033)	(.042)	(.022)	(.012)	(.036)	(.024)	(.281)	(.266)	(.039)	(.001)
hours² / 1,000	-0.208	-0.226	-0.110	-0.194	0.028	0.008	-0.087	-0.060	-0.184	-0.099	-0.036	-0.003
	(.064)	(.067)	(.046)	(.063)	(.036)	(.031)	(.044)	(.036)	(.168)	(.124)	(.036)	(.000)
hours x income / 1,000	-0.208	-0.226	-0.110	-0.194	0.028	0.008	-0.087	-0.060	-0.184	-0.099	-0.036	-0.036
	(.064)	(.067)	(.046)	(.063)	(.036)	(.031)	(.044)	(.036)	(.168)	(.124)	(.036)	(.005)
income	-0.028	-0.071	0.014	0.006	0.020	0.015	-0.025	-0.028	-0.023	-0.049	0.016	0.008
	(.012)	(.039)	(.026)	(.024)	(.013)	(.010)	(.007)	(.008)	(.070)	(.063)	(.015)	(.002)
x age/10	0.019	0.039	-0.006	-0.005	-0.003	-0.001	0.019	0.017	0.015	0.036	-0.008	0.007
	(.007)	(.019)	(.012)	(.011)	(.007)	(.005)	(.004)	(.005)	(.035)	(.031)	(.008)	(.001)
x age² /100	-0.002	-0.005	0.001	0.001	0.000	0.000	-0.002	-0.002	-0.002	-0.005	0.001	-0.017
	(.001)	(.002)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.004)	(.004)	(.001)	(.000)
x # children	-0.004	-0.003	-0.001	0.000	-0.001	0.000	0.001	0.001	0.005	-0.006	-0.002	0.000
	(.001)	(.002)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.004)	(.003)	(.001)	(.000)
hours	0.282	0.322	0.148	0.333	0.164	0.170	0.174	0.243	1.029	0.787	0.658	5.252
	(.083)	(.124)	(.130)	(.146)	(.072)	(.062)	(.030)	(.050)	(.121)	(.114)	(.042)	(.210)
x age/10	0.040	0.011	0.098	0.067	0.015	0.043	0.014	-0.015	-0.021	-0.021	0.087	0.020
	(.042)	(.057)	(.062)	(.069)	(.036)	(.030)	(.017)	(.027)	(.050)	(.051)	(.017)	(.008)
x age² /100	-0.008	-0.001	-0.014	-0.010	-0.001	-0.004	-0.001	0.001	0.002	0.003	-0.012	-0.002
	(.006)	(.007)	(.007)	(.008)	(.004)	(.004)	(.002)	(.003)	(.006)	(.006)	(.002)	(.001)
x 1(children 0-2)	-0.111	0.192	-0.041	-0.058	-0.026	-0.011	0.025	-0.010	0.029	0.070	-0.030	-0.027
	(.062)	(.029)	(.015)	(.023)	(.036)	(.027)	(.014)	(.019)	(.107)	(.055)	(.021)	(.006)
x 1(children 3-6)	-0.041	0.028	-0.002	-0.044	-0.038	-0.040	0.000	-0.007	0.002	-0.035	-0.017	-0.010
	(.018)	(.024)	(.011)	(.014)	(.009)	(.008)	(.007)	(.007)	(.015)	(.011)	(.004)	(.002)
x 1(elderly)	-0.024	0.007	-0.014	-0.008	0.007	0.011	0.008	-0.004	-0.010	-0.010	-0.014	-0.010
	(.044)	(.011)	(.008)	(.010)	(.012)	(.012)	(.006)	(.007)	(.010)	(.010)	(.003)	(.002)
x 1(region)		0.042	0.003	-0.007	-0.017	0.008	0.009	0.017	0.012	0.013	0.007	0.006
		(.011)	(.007)	(.008)	(.007)	(.007)	(.003)	(.005)	(.009)	(.007)	(.003)	(.002)
fixed cost	5.271	6.579	6.202	7.147	4.235	5.117	4.321	3.785	19.329	14.882	15.123	10.259
	(.537)	(.767)	(.618)	(.722)	(.465)	(.509)	(.241)	(.389)	(1.385)	(.964)	(.461)	(.200)
x # children	-0.350	-0.880	-0.160	-0.239	0.502	0.320	0.058	0.107	0.232	-0.187	0.199	0.114
	(.201)	(.253)	(.191)	(.255)	(.134)	(.133)	(.109)	(.118)	(.236)	(.197)	(.072)	(.039)
x 1(children 0-2)	-0.685	9.216	-0.629	-0.944	1.538	1.537	1.248	0.843	2.343	5.158	-0.315	-0.661
	(1.517)	(1.892)	(.931)	(1.397)	(1.060)	(.923)	(.543)	(.676)	(4.478)	(2.339)	(.760)	(.254)
x high educ.	-1.073	-2.041	-0.691	-1.259	-0.708	-0.539	-1.307	-1.102	-1.744	-1.645	-1.221	0.032
	(.329)	(.940)	(.275)	(.373)	(.311)	(.336)	(.184)	(.331)	(.418)	(.288)	(.096)	(.064)
Nb of observations	450	278	373	329	753	779	1924	1307	476	646	3106	9277
Log-Likelihood	-636	-407	-575	-498	-1019	-1114	-3115	-2168	-564	-803	-3864	-12690
pseudo-R2	0.27	0.25	0.21	0.22	0.30	0.27	0.17	0.15	0.39	0.36	0.36	0.30

Note: Region dummy corresponds to Lisboa, Catalunya, London, Stockholm, Tallin, Budapest region, Warsaw region, US metropolitain areas. Region not available for the Netherlands. Std. errors in brackets.

Table D.7: Labor Supply Estimations: Single Men

Coeff.	AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
	98	98	01	94	98	95	01	97	00	94	94	00	95
income² / 10,000	-0.041	0.102	0.131	0.076	-0.032	0.026	0.053	0.037	0.056	0.076	-0.082	-0.157	-0.010
	(.031)	(.070)	(.082)	(.025)	(.037)	(.009)	(.019)	(.034)	(.025)	(.073)	(.064)	(.070)	(.033)
hours² / 1,000	-8.681	-9.255	-5.686	-4.361	-7.244	-6.165	-5.427	-3.753	-4.470	-5.948	-2.150	-5.057	-7.862
	(1.007)	(1.014)	(.984)	(.620)	(.539)	(.403)	(.399)	(.439)	(.469)	(.870)	(.707)	(1.029)	(.755)
hours x income / 1,000	0.035	-0.275	-0.656	-0.314	-0.156	-0.076	-0.186	-0.287	-0.335	-0.041	-0.264	0.042	-0.074
	(.062)	(.107)	(.141)	(.058)	(.055)	(.029)	(.041)	(.067)	(.061)	(.075)	(.101)	(.130)	(.053)
income	-0.033	0.071	-0.049	0.037	0.007	0.002	0.008	0.006	0.011	0.040	0.070	0.005	0.012
	(.028)	(.034)	(.050)	(.015)	(.012)	(.012)	(.010)	(.013)	(.014)	(.059)	(.034)	(.046)	(.028)
x age/10	0.017	-0.023	0.051	-0.015	0.000	0.001	-0.002	0.003	0.000	-0.019	-0.024	0.016	-0.005
	(.016)	(.017)	(.023)	(.008)	(.006)	(.006)	(.006)	(.007)	(.007)	(.030)	(.017)	(.024)	(.013)
x age² /100	-0.002	0.002	-0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	-0.002	0.001
	(.002)	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.004)	(.002)	(.003)	(.002)
x # children	-0.008	-0.009	0.000	0.000	0.007	-0.003	0.000	-0.001	-0.002	-0.005	0.008	0.015	-0.002
	(.008)	(.005)	(.006)	(.004)	(.004)	(.001)	(.001)	(.001)	(.002)	(.005)	(.004)	(.009)	(.002)
hours	0.648	0.589	1.026	0.278	0.575	0.341	0.169	0.291	0.244	0.457	0.094	0.572	0.396
	(.211)	(.141)	(.231)	(.113)	(.070)	(.068)	(.057)	(.076)	(.089)	(.249)	(.190)	(.380)	(.191)
x age/10	0.009	0.091	-0.247	0.089	0.039	0.084	0.153	0.036	0.092	0.001	0.086	-0.170	0.132
	(.116)	(.063)	(.107)	(.062)	(.033)	(.033)	(.028)	(.040)	(.046)	(.132)	(.094)	(.192)	(.089)
x age² /100	-0.004	-0.010	0.032	-0.013	-0.007	-0.011	-0.020	-0.006	-0.014	0.001	-0.011	0.020	-0.017
	(.015)	(.008)	(.012)	(.008)	(.004)	(.004)	(.004)	(.005)	(.006)	(.017)	(.011)	(.023)	(.010)
x # children	0.062	0.070	0.054	0.031	-0.014	0.029	0.023	0.034	0.049	0.015	-0.011	-0.060	0.023
	(.061)	(.036)	(.031)	(.027)	(.018)	(.011)	(.010)	(.012)	(.013)	(.023)	(.023)	(.067)	(.013)
x 1(elderly)	-0.010	0.029	0.044	0.071	0.006	-0.014	0.008	0.038	0.046	-0.022	0.047	0.019	0.000
	(.019)	(.018)	(.026)	(.024)	(.009)	(.009)	(.011)	(.014)	(.016)	(.012)	(.014)	(.016)	(.010)
x 1(region)	0.032	-0.029	-0.025		0.012	0.020	0.009	-0.011	0.003	0.017	-0.027	-0.029	-0.044
	(.015)	(.014)	(.017)		(.005)	(.008)	(.008)	(.007)	(.008)	(.010)	(.011)	(.014)	(.008)
fixed cost	12.268	16.034	12.524	9.423	12.730	9.491	7.380	6.469	6.961	9.755	7.789	7.161	11.997
	(1.643)	(1.603)	(1.460)	(.948)	(.830)	(.681)	(.558)	(.560)	(.636)	(1.359)	(1.030)	(1.106)	(1.123)
x high educ.	-1.445	-1.521	-0.983	-0.468	-0.562	-0.812	-0.726	0.313	0.675	-0.986	-1.669	1.054	-0.211
	(.793)	(.472)	(.568)	(.386)	(.198)	(.377)	(.268)	(.322)	(.390)	(.488)	(.508)	(.634)	(.340)
Nb of observations	176	267	207	351	724	796	746	657	676	151	188	159	334
Log-Likelihood	-219	-315	-240	-473	-990	-1160	-1084	-984	-947	-222	-240	-208	-455
pseudo-R2	0.36	0.39	0.40	0.31	0.30	0.25	0.25	0.23	0.28	0.24	0.34	0.33	0.30

Note: Region dummy corresponds to Wienna & Niederoesterreich, Brussels, Helsinki, Paris region, East Germany, Dublin, Southern Italy. Region not available for Denmark. Std. errors in brackets.

Table D.8: Labor Supply Estimations: Single Men (cont.)

Coeff.	NL 99	PT 00	SP 95	SP 99	UK 96	UK 01	SW 97	SW 01	EE 05	HU 05	PL 05	US 05
income^2 / 10,000	-0.017	-0.060	0.054	0.059	0.049	-0.010	-0.049	-0.016	1.919	-0.292	0.089	-0.002
	(.023)	(.071)	(.048)	(.039)	(.026)	(.016)	(.029)	(.015)	(1.310)	(.221)	(.087)	(.001)
hours^2 / 1,000	-4.102	-6.063	-8.780	-6.384	-4.383	-5.626	-1.852	-2.235	-7.287	-6.190	-10.332	-6.375
	(.573)	(.804)	(.968)	(.662)	(.585)	(.596)	(.188)	(.226)	(1.026)	(.518)	(.520)	(.170)
hours x income / 1,000	-0.100	-0.103	-0.180	-0.125	-0.211	-0.101	-0.197	-0.168	-0.742	0.069	-0.146	-0.060
	(.062)	(.111)	(.067)	(.057)	(.060)	(.047)	(.040)	(.032)	(.406)	(.132)	(.057)	(.006)
income	0.026	0.028	0.136	0.018	0.045	0.013	-0.022	-0.015	-0.232	0.045	0.041	0.009
	(.018)	(.057)	(.044)	(.034)	(.013)	(.014)	(.006)	(.007)	(.088)	(.078)	(.030)	(.002)
x age/10	-0.011	-0.007	-0.064	-0.014	-0.018	-0.001	0.020	0.012	0.108	-0.019	-0.015	0.000
	(.010)	(.029)	(.021)	(.016)	(.007)	(.007)	(.004)	(.004)	(.045)	(.039)	(.015)	(.001)
x age^2 /100	0.002	0.001	0.008	0.002	0.002	0.000	-0.002	-0.001	-0.012	0.003	0.002	0.000
	(.001)	(.003)	(.003)	(.002)	(.001)	(.001)	(.000)	(.001)	(.006)	(.005)	(.002)	(.000)
x # children	0.003	0.006	-0.001	0.008	0.003	0.006	-0.001	0.002	-0.042	-0.003	0.005	0.000
	(.004)	(.004)	(.003)	(.004)	(.002)	(.002)	(.002)	(.002)	(.031)	(.007)	(.003)	(.000)
hours	-0.046	0.605	-0.025	0.474	0.191	0.437	0.191	0.253	1.016	0.443	0.690	0.461
	(.123)	(.176)	(.235)	(.225)	(.085)	(.097)	(.026)	(.048)	(.169)	(.125)	(.053)	(.022)
x age/10	0.216	-0.057	0.390	0.081	0.121	0.016	-0.023	-0.027	-0.162	0.035	0.057	0.038
	(.070)	(.083)	(.112)	(.105)	(.040)	(.045)	(.015)	(.027)	(.070)	(.059)	(.019)	(.009)
x age^2 /100	-0.030	0.006	-0.048	-0.013	-0.014	-0.002	0.002	0.002	0.017	-0.006	-0.009	-0.005
	(.009)	(.010)	(.013)	(.012)	(.005)	(.005)	(.002)	(.003)	(.008)	(.007)	(.002)	(.001)
x # children	-0.007	-0.011	0.015	-0.048	-0.013	-0.046	0.032	0.003	0.067	0.010	0.005	-0.005
	(.026)	(.008)	(.016)	(.029)	(.012)	(.016)	(.009)	(.010)	(.044)	(.013)	(.003)	(.003)
x 1(elderly)	-0.014	0.013	-0.009	-0.031	0.008	-0.001	-0.022		-0.008	-0.034	-0.028	-0.019
	(.045)	(.014)	(.009)	(.011)	(.010)	(.011)	(.065)		(.013)	(.009)	(.004)	(.002)
x 1(region)		0.017	0.014	0.006	-0.010	-0.006	0.002	0.004	-0.015	0.034	0.000	0.005
		(.014)	(.008)	(.009)	(.008)	(.009)	(.003)	(.004)	(.014)	(.008)	(.004)	(.002)
fixed cost	4.639	9.076	14.994	10.175	9.882	10.106	3.449	3.305	12.886	9.438	14.417	11.912
	(.802)	(1.233)	(1.498)	(1.043)	(.973)	(.971)	(.216)	(.397)	(1.705)	(.842)	(.716)	(.285)
x high educ.	-0.053	-3.244	-0.575	-0.735	-0.834	-1.018	-0.874	-0.161	-1.201	-0.458	-0.804	0.114
	(.575)	(1.775)	(.338)	(.389)	(.464)	(.521)	(.166)	(.342)	(.564)	(.334)	(.141)	(.082)
Nb of observations	313	170	295	273	424	442	2386	1405	154	418	1228	5726
Log-Likelihood	-467	-243	-369	-390	-629	-637	-3989	-2359	-212	-611	-1518	-7904
pseudo-R2	0.23	0.27	0.36	0.27	0.24	0.26	0.14	0.14	0.29	0.25	0.36	0.29

Note: Region dummy corresponds to Lisboa, Catalunya, London, Stockholm, Tallin, Budapest region, Warsaw region, US metropolitain areas. Region not available for the Netherlands, too few observations with elderly for Sweden. Std. errors in brackets.

E Labor Supply Model: Goodness-of-Fit

Pseudo-R2 reported in Tables D.1-D.8 convey that the fit is reasonably good: .31 on average for couples (.28 for singles), from .23 for the UK to .45 for Poland (from .14 to .40 for singles). However, since pseudo-R2 cannot be interpreted as standard R2, a more useful measure of the fit consists of the comparison between observed and predicted hours. For couples, Table E.1 shows that mean predicted hours compare well with actual ones, as the discrepancy is less than 1% in most of the cases. There are some exceptions, with larger discrepancies for women in Portugal, Greece and Spain. For the two latter countries, we report the distribution of observed and predicted frequencies for each choice below Table E.1 (we use the 4-choices model, i.e. 16 combinations for couples, to make results more easily readable). We can see that the option (40,40), i.e. both spouses work full-time, is slightly underestimated while option (0,40), i.e. she does not not work and he works full-time, is overpredicted. Yet, even for these countries, the overall distributions of observed and predicted hours compare relatively well. We have checked for all countries that satisfying comparisons at the mean do not hide wrong hour distributions. As an illustration of this, we report two additional graphs in cases where mean hours are correctly predicted (France and the Netherlands), confirming that the underlying distributions of predicted and observed choices also well in line.

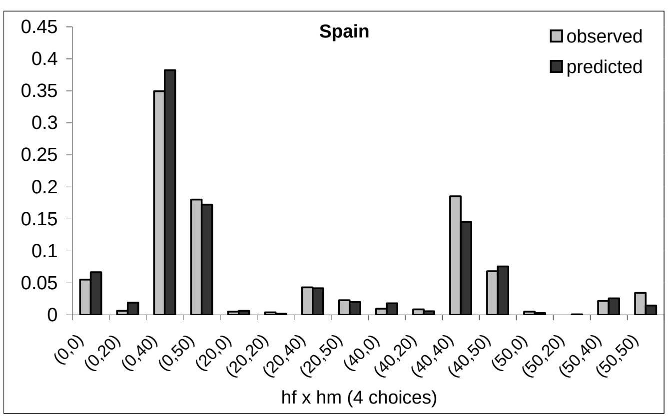
For single individuals, mean predicted and observed hours compare well for many countries, as shown in Table E.2. The fit is however not as good as for couples, which is a usual result in the literature (Blundell and MaCurdy, 1999).[3] The discrepancy is less than 5% in almost all cases. For three cases with the largest discrepancies (Belgian women 1998, Irish men 1998 and Portuguese women 2001), we present the hour distributions underneath Table E.2 (baseline situation with 7 choices). Generally, differences are due to bad predictions in terms of participation, as it is the case for Irish single men (Portuguese single women) where non-participation is over(under)-predicted. It is also due to the fact that the model is not able to reproduce well the hours distribution for the workers. This is the case for Belgian women, for whom participation rates are well predicted but part-time options are over-predicted to the expense of full-time. This is also the case when the overall fit is good, for instance in the case of French men 2001 reported in our illustration.

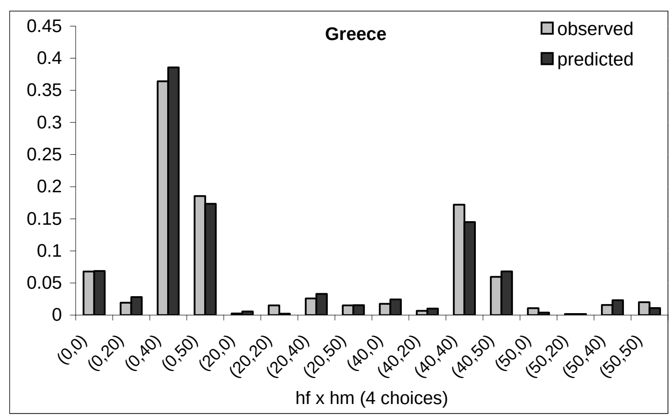
Finally, in order to compare the within-sample fit with out-of-sample predictions, we have estimated the baseline model on a random half of the sample for each country, then used it to predict hours for the other half. Fit measures on the holdout sample show similar results as in Tables E.1-E.2 and convey that the flexible model we use does not overfit the data in a way that would reduce external validity.

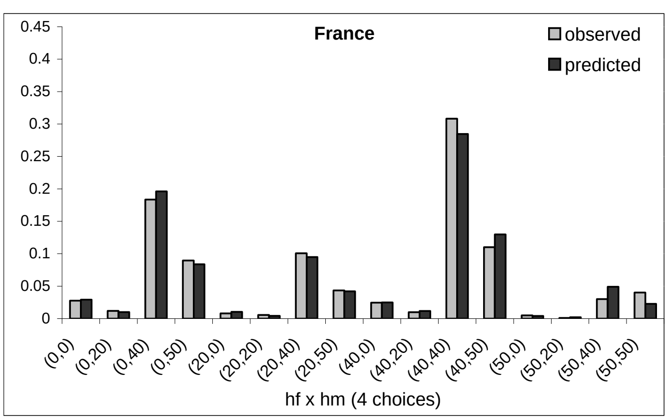
[3] Estimates are also slightly more precise for couples than for single individuals. Both issues may be due to the fact that there is less variation in labor market behavior among singles (with the exception of lone parents). Also, the model for couples generally fits the data better because inactivity is more of a voluntary choice for married women than for single individuals (see Bargain et al., 2009).

Table E.1: Predicted and Observed Mean Hours: Couples

		AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
		98	98	01	98	98	98	01	98	01	98	98	01	98
Female	observed	16.8	24.0	24.3	29.5	32.0	23.1	23.2	19.6	20.7	13.3	11.0	17.5	15.5
	predicted	17.3	24.2	24.2	29.1	31.3	22.9	23.2	19.6	21.1	12.6	10.7	17.2	15.4
	gap %	*2.6%*	*0.7%*	*-0.1%*	*-1.1%*	*-2.3%*	*-0.8%*	*-0.2%*	*-0.1%*	*2.0%*	*-5.1%*	*-2.7%*	*-1.5%*	*-1.0%*
Male	observed	40.3	39.0	39.4	38.3	37.5	38.2	37.0	35.3	35.6	37.9	31.9	36.7	36.0
	predicted	40.5	38.1	38.5	38.4	37.0	38.1	37.0	35.6	35.6	37.6	31.3	36.2	36.5
	gap %	*0.4%*	*-2.3%*	*-2.5%*	*0.2%*	*-1.3%*	*-0.1%*	*-0.2%*	*0.9%*	*-0.1%*	*-0.8%*	*-1.9%*	*-1.4%*	*1.4%*
			NL	PT	SP	SP	UK	UK	SW	SW	EE	HU	PL	US
			01	01	98	01	98	01	98	01	05	05	05	05
Female	observed		18.2	26.4	12.0	14.7	20.8	22.1	28.4	30.7	33.2	28.6	23.4	27.0
	predicted		18.3	28.2	12.3	13.5	21.2	22.7	28.7	30.8	33.7	28.6	23.5	26.6
	gap %		*0.4%*	*7.0%*	*2.8%*	*-7.8%*	*1.8%*	*3.1%*	*1.0%*	*0.3%*	*1.3%*	*0.2%*	*0.3%*	*-1.3%*
Male	observed		39.2	39.6	36.8	38.9	37.1	37.1	35.8	37.1	35.9	37.4	33.3	41.1
	predicted		39.1	39.8	36.3	38.2	37.6	37.9	36.2	37.2	36.4	37.3	33.3	40.9
	gap %		*-0.2%*	*0.4%*	*-1.4%*	*-1.8%*	*1.3%*	*2.3%*	*1.2%*	*0.2%*	*1.4%*	*-0.2%*	*0.3%*	*-0.4%*







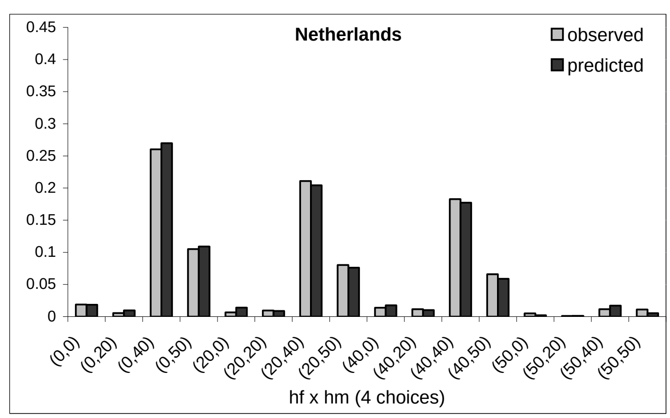
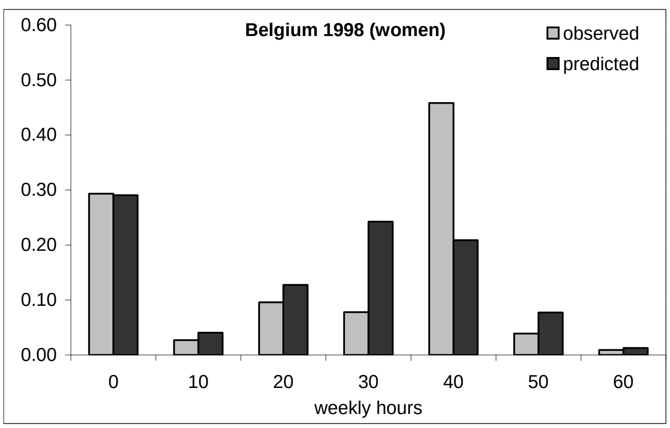
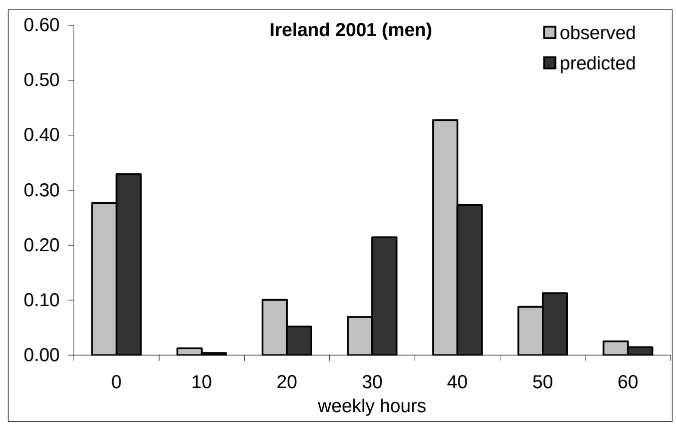


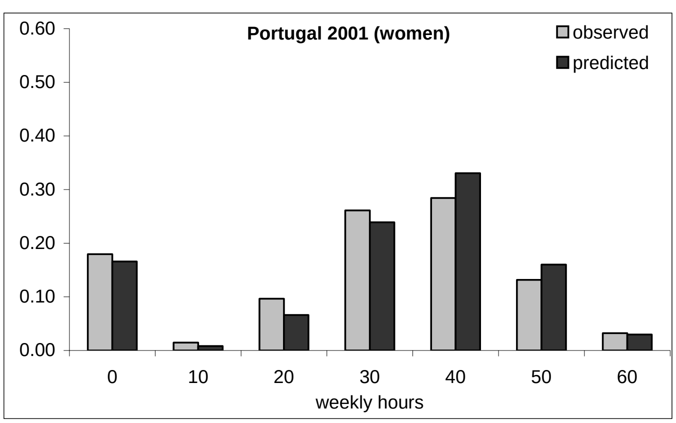
Table E.2: Predicted and Observed Mean Hours: Couples

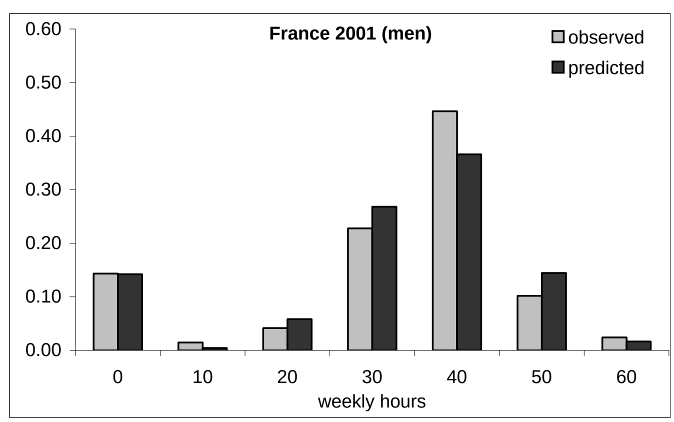
		AT 98	BE 98	BE 01	DK 98	FI 98	FR 98	FR 01	GE 98	GE 01	GR 98	IE 98	IE 01	IT 98
Female	observed	28.8	25.3	27.4	28.6	31.2	29.7	28.1	25.9	26.8	21.6	17.4	22.5	27.3
	predicted	30.2	23.2	26.5	28.6	30.4	29.5	28.2	25.1	25.9	20.4	17.7	23.9	27.1
	gap %	*4.6%*	*-8.4%*	*-3.4%*	*0.2%*	*-2.7%*	*-0.4%*	*0.3%*	*-2.9%*	*-3.2%*	*-5.9%*	*1.4%*	*6.0%*	*-0.4%*
Male	observed	36.8	35.1	34.6	32.9	30.4	33.5	32.2	31.9	32.6	31.6	24.7	27.2	28.8
	predicted	37.2	34.1	34.0	32.2	28.9	33.3	32.1	31.6	31.4	30.6	22.9	24.9	28.7
	gap %	*1.2%*	*-2.9%*	*-1.7%*	*-2.0%*	*-5.0%*	*-0.5%*	*-0.3%*	*-0.7%*	*-3.9%*	*-3.0%*	*-7.5%*	*-8.4%*	*-0.3%*

		NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05
Female	observed	25.1	28.2	26.1	27.4	20.0	22.2	25.8	29.8	33.4	33.4	26.2	32.7
	predicted	25.9	29.8	25.6	28.4	20.3	22.6	25.9	29.5	33.2	33.2	26.3	32.7
	gap %	*3.2%*	*5.7%*	*-2.0%*	*3.3%*	*1.5%*	*1.9%*	*0.3%*	*-1.0%*	*-0.5%*	*-0.5%*	*0.4%*	*-0.2%*
Male	observed	35.1	32.1	27.5	32.8	28.9	32.1	26.6	31.9	30.4	32.8	23.0	36.2
	predicted	34.3	33.4	27.0	32.8	28.7	32.2	26.5	30.6	30.6	32.5	22.9	35.9
	gap %	*-2.4%*	*4.0%*	*-1.6%*	*-0.1%*	*-0.7%*	*0.2%*	*-0.2%*	*-3.9%*	*0.6%*	*-1.0%*	*-0.5%*	*-0.9%*









F Labor Supply Elasticities

Table F.1: Labor Supply Elasticities: Married Women

		AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
		98	98	01	98	98	98	01	98	01	98	98	01	98
Own-wage elasticity														
Total hours		.34	.28	.31	.30	.13	.23	.13	.31	.31	.62	.47	.32	.33
		(.04)	(.03)	(.05)	(.03)	(.01)	(.02)	(.01)	(.03)	(.01)	(.06)	(.05)	(.04)	(.03)
Total hours (compensated)		.34	.29	.31	.30	.13	.23	.13	.35	.31	.62	.48	.32	.32
		(.04)	(.03)	(.05)	(.03)	(.01)	(.02)	(.01)	(.03)	(.01)	(.06)	(.05)	(.04)	(.03)
Intensive margin (hour)		.05	.05	.05	.06	.01	.03	.02	.06	.08	.03	.08	.05	.05
		(.01)	(.00)	(.01)	(.01)	(.00)	(.00)	(.00)	(.01)	(.00)	(.00)	(.01)	(.01)	(.00)
Extensive margin (hour)		.29	.24	.27	.24	.12	.20	.11	.24	.23	.59	.39	.27	.27
		(.03)	(.02)	(.03)	(.02)	(.01)	(.01)	(.01)	(.02)	(.01)	(.05)	(.04)	(.03)	(.03)
Extensive margin (particip.)		.27	.22	.23	.25	.12	.19	.10	.24	.22	.57	.42	.27	.28
		(.03)	(.02)	(.03)	(.02)	(.01)	(.01)	(.01)	(.02)	(.01)	(.05)	(.04)	(.03)	(.03)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.34	.25	.34	.28	.12	.21	.09	.35	.31	.58	.43	.39	.30
	ext. margin (hour)	.29	.20	.26	.25	.11	.18	.07	.28	.23	.55	.39	.33	.27
quintile 2	total hours	.32	.23	.27	.31	.11	.20	.09	.30	.30	.58	.38	.33	.29
	ext. margin (hour)	.28	.18	.20	.28	.11	.17	.07	.24	.22	.54	.35	.28	.26
quintile 3	total hours	.32	.25	.29	.26	.12	.21	.10	.30	.31	.59	.40	.28	.29
	ext. margin (hour)	.26	.20	.21	.23	.12	.18	.08	.23	.22	.56	.37	.24	.25
quintile 4	total hours	.33	.29	.31	.27	.14	.24	.14	.30	.31	.61	.42	.30	.32
	ext. margin (hour)	.26	.23	.23	.23	.13	.20	.11	.21	.21	.58	.38	.25	.27
quintile 5	total hours	.37	.41	.36	.36	.16	.27	.21	.30	.34	.68	.73	.30	.40
	ext. margin (hour)	.29	.31	.26	.28	.15	.23	.17	.22	.23	.63	.59	.26	.34
with children	total hours	.35	.28	.30	.31	.14	.24	.13	.31	.34	.63	.56	.35	.31
no children	total hours	.31	.29	.34	.28	.12	.20	.12	.30	.28	.53	.23	.21	.38
Cross-wage elasticity														
Total hours		-.13	-.07	-.05	-.14	-.07	-.11	-.07	-.19	-.17	-.09	-.22	-.14	.04
		(.04)	(.03)	(.04)	(.03)	(.02)	(.01)	(.02)	(.02)	(.03)	(.05)	(.04)	(.04)	(.03)
Total hours (compensated)		-.13	-.06	-.05	-.14	-.07	-.10	-.07	-.11	-.18	-.09	-.20	-.14	.04
		(.04)	(.03)	(.04)	(.03)	(.02)	(.01)	(.02)	(.02)	(.03)	(.05)	(.04)	(.04)	(.03)
Extensive margin (particip.)		-.10	-.05	-.04	-.11	-.05	-.08	-.05	-.13	-.11	-.09	-.17	-.10	.03
		(.03)	(.02)	(.03)	(.02)	(.01)	(.01)	(.01)	(.02)	(.02)	(.04)	(.03)	(.03)	(.03)
Income elasticity														
Total hours		-.0011	-.0021	-.0018	-.0040	.0010	-.0031	-.0023	-.0059	-.0057	-.0039	-.0082	-.0069	.0010
		(.0003)	(.0012)	(.0014)	(.0005)	(.0001)	(.0004)	(.0006)	(.0008)	(.0009)	(.0019)	(.0007)	(.0017)	(.0042)
Extensive margin (particip.)		-.0008	-.0016	-.0012	-.0032	.0010	-.0022	-.0016	-.0043	-.0038	-.0035	-.0066	-.0071	.0009
		(.0002)	(.0010)	(.0011)	(.0004)	(.0001)	(.0004)	(.0005)	(.0006)	(.0006)	(.0018)	(.0006)	(.0016)	(.0036)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.2: Labor Supply Elasticities: Married Women (cont.)

		NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05	Mean
Own-wage elasticity														
Total hours		.32	.14	.63	.51	.12	.09	.16	.11	.08	.15	.10	.14	.265
		(.03)	(.02)	(.05)	(.05)	(.02)	(.02)	(.01)	(.01)	(.02)	(.02)	(.00)	(.00)	(.03)
Total hours (compensated)		.32	.14	.62	.51	.12	.09	.17	.12	.08	.15	.10	.14	.268
		(.03)	(.02)	(.05)	(.05)	(.02)	(.02)	(.01)	(.01)	(.02)	(.02)	(.00)	(.00)	(.03)
Intensive margin (hour)		.13	.05	.06	.08	.03	.02	.04	.05	.01	.01	.01	.02	.05
		(.01)	(.00)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.00)	(.00)	(.00)	(.01)
Extensive margin (hour)		.19	.10	.56	.43	.09	.08	.12	.06	.07	.14	.09	.12	.22
		(.02)	(.02)	(.04)	(.04)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.00)	(.00)	(.02)
Extensive margin (particip.)		.20	.11	.53	.43	.08	.07	.11	.07	.06	.13	.09	.12	.22
		(.02)	(.02)	(.04)	(.04)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.00)	(.00)	(.02)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.24	.13	.45	.42	.09	.08	.19	.16	.07	.19	.09	.14	.25
	ext. margin (hour)	.17	.10	.39	.37	.07	.06	.14	.09	.05	.16	.08	.12	.21
quintile 2	total hours	.25	.11	.47	.41	.09	.07	.19	.14	.08	.17	.09	.14	.24
	ext. margin (hour)	.17	.09	.41	.36	.07	.06	.13	.08	.06	.15	.08	.12	.20
quintile 3	total hours	.32	.12	.54	.44	.10	.08	.17	.12	.08	.15	.09	.14	.24
	ext. margin (hour)	.20	.10	.47	.38	.07	.07	.12	.06	.06	.14	.08	.12	.20
quintile 4	total hours	.34	.13	.64	.51	.12	.10	.15	.10	.09	.14	.10	.14	.26
	ext. margin (hour)	.21	.11	.56	.43	.09	.08	.10	.06	.07	.12	.09	.12	.21
quintile 5	total hours	.45	.21	.93	.72	.17	.14	.12	.06	.09	.12	.12	.15	.33
	ext. margin (hour)	.27	.15	.77	.60	.11	.11	.09	.04	.07	.09	.11	.11	.26
with children	total hours	.33	.16	.68	.59	.13	.11	.18	.11	.07	.16	.10	.15	.28
no children	total hours	.31	.10	.46	.35	.10	.07	.14	.12	.11	.11	.12	.13	.23
Cross-wage elasticity														
Total hours		-.08	.00	-.05	.03	-.04	-.07	-.04	-.03	-.03	.04	.08	.01	-.064
		(.04)	(.01)	(.03)	(.03)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.02)
Total hours (compensated)		-.08	.00	-.06	.03	-.04	-.07	-.03	-.03	-.03	.04	.07	.01	-.059
		(.04)	(.01)	(.03)	(.03)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.02)
Extensive margin (particip.)		-.05	.00	-.05	.02	-.02	-.04	.00	-.01	-.02	.04	.08	.01	-.04
		(.03)	(.01)	(.02)	(.03)	(.01)	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.00)	(.02)
Income elasticity														
Total hours		-.0008	.0000	-.0005	.0004	-.0028	-.0022	-.0080	-.0023	-.00004	.00001	.0001	-.00003	-.0024
		(.0007)	(.0001)	(.0003)	(.0008)	(.0005)	(.0004)	(.0008)	(.0004)	(.00001)	(.00006)	(.0000)	(.00009)	(.0008)
Extensive margin (particip.)		-.0008	.0000	-.0004	.0003	-.0019	-.0015	-.0036	-.0010	-.00002	.00000	.0001	.0000	-.0017
		(.0005)	(.0001)	(.0003)	(.0007)	(.0004)	(.0003)	(.0005)	(.0002)	(.00001)	(.00004)	(.0000)	(.00008)	(.0006)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.3: Labor Supply Elasticities: Married Men

		AT 98	BE 98	BE 01	DK 98	FI 98	FR 98	FR 01	GE 98	GE 01	GR 98	IE 98	IE 01	IT 98
Own-wage elasticity														
Total hours		.07	.13	.12	.15	.10	.09	.06	.13	.14	.11	.26	.15	.04
		(.02)	(.01)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)	(.02)	(.01)
Total hours (compensated)		.07	.13	.12	.15	.10	.09	.06	.15	.14	.11	.29	.16	.05
		(.02)	(.01)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)	(.02)	(.01)
Intensive margin (hour)		.02	.02	.02	.02	.00	.02	.02	.03	.03	.01	.00	.03	-.01
		(.01)	(.00)	(.01)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.01)	(.00)	(.00)
Extensive margin (hour)		.05	.11	.10	.14	.10	.07	.04	.10	.11	.11	.26	.12	.05
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.01)	(.02)	(.01)
Extensive margin (particip.)		.05	.10	.09	.13	.10	.07	.04	.10	.11	.10	.27	.12	.05
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.01)	(.02)	(.01)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.08	.15	.16	.20	.12	.10	.05	.19	.18	.12	.41	.21	.03
	ext. margin (hour)	.06	.13	.13	.20	.12	.08	.04	.16	.16	.10	.39	.16	.05
quintile 2	total hours	.08	.11	.12	.16	.10	.09	.05	.12	.13	.11	.26	.16	.03
	ext. margin (hour)	.05	.09	.09	.16	.10	.07	.03	.09	.11	.10	.25	.12	.04
quintile 3	total hours	.07	.10	.11	.11	.09	.09	.05	.13	.13	.11	.21	.14	.03
	ext. margin (hour)	.05	.08	.08	.11	.09	.07	.03	.10	.10	.10	.22	.11	.04
quintile 4	total hours	.07	.12	.10	.11	.08	.08	.06	.12	.12	.11	.18	.12	.04
	ext. margin (hour)	.04	.09	.07	.09	.08	.06	.04	.09	.09	.09	.21	.10	.05
quintile 5	total hours	.07	.16	.11	.18	.10	.08	.09	.10	.12	.13	.26	.14	.06
	ext. margin (hour)	.04	.11	.08	.11	.09	.06	.05	.09	.09	.12	.29	.14	.08
Cross-wage elasticity														
Total hours		-.01	-.02	-.01	-.05	-.03	-.01	-.01	-.05	-.06	-.04	-.07	-.02	-.04
		(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Total hours (compensated)		-.01	-.02	-.01	-.05	-.03	-.01	-.01	-.04	-.05	-.04	-.06	-.02	-.03
		(.01)	(.01)	(.01)	(.02)	(.01)	(.00)	(.00)	(.01)	(.01)	(.01)	(.02)	(.02)	(.01)
Extensive margin (particip.)		.00	-.01	.00	-.03	-.02	.00	.00	-.03	-.04	-.03	-.05	-.01	-.03
		(.00)	(.01)	(.00)	(.01)	(.01)	(.00)	(.00)	(.00)	(.01)	(.01)	(.01)	(.01)	(.00)
Income elasticity														
Total hours		-.0003	-.0015	-.0019	-.0027	.0010	.0001	-.0004	-.0031	-.0036	-.0047	-.0097	-.0036	-.0168
		(.0001)	(.0005)	(.0005)	(.0004)	(.0001)	(.0002)	(.0003)	(.0003)	(.0004)	(.0010)	(.0006)	(.0006)	(.0023)
Extensive margin (particip.)		-.0001	-.0010	-.0011	-.0021	.0010	.0005	.0001	-.0020	-.0022	-.0034	-.0077	-.0022	-.0129
		(.0000)	(.0003)	(.0004)	(.0003)	(.0001)	(.0001)	(.0001)	(.0002)	(.0003)	(.0008)	(.0005)	(.0005)	(.0019)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.4: Labor Supply Elasticities: Married Men (cont.)

		NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05	Mean
Own-wage elasticity														
Total hours		.06	.04	.14	.08	.06	.03	.11	.07	.08	.08	.04	.08	.097
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)
Total hours (compensated)		.06	.04	.15	.08	.06	.04	.12	.07	.08	.08	.04	.08	.100
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)
Intensive margin (hour)		.01	.03	-.07	.07	.00	.00	.00	.00	.00	.00	.00	.00	.01
		(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
Extensive margin (hour)		.05	.01	.22	.00	.06	.03	.11	.07	.08	.08	.04	.08	.09
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)
Extensive margin (particip.)		.06	.03	.14	.07	.08	.06	.09	.05	.07	.07	.03	.04	.09
		(.01)	(.01)	(.01)	(.01)	(.009)	(.01)	(.00)	(.01)	(.01)	(.01)	(.002)	(.00)	(.01)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.08	.03	.13	.06	.06	.03	.16	.12	.08	.08	.03	.09	.12
	ext. margin (hour)	.07	.03	.13	.06	.07	.05	.13	.08	.07	.08	.03	.07	.11
quintile 2	total hours	.05	.03	.11	.06	.05	.03	.15	.10	.08	.08	.03	.08	.10
	ext. margin (hour)	.05	.03	.11	.06	.07	.05	.12	.06	.07	.08	.03	.05	.08
quintile 3	total hours	.06	.03	.13	.07	.06	.04	.12	.07	.08	.08	.03	.08	.09
	ext. margin (hour)	.05	.03	.13	.06	.07	.06	.09	.05	.07	.08	.03	.05	.08
quintile 4	total hours	.05	.03	.16	.08	.06	.03	.10	.05	.08	.08	.04	.07	.09
	ext. margin (hour)	.05	.03	.15	.07	.09	.06	.08	.04	.07	.07	.03	.04	.08
quintile 5	total hours	.06	.06	.19	.11	.07	.04	.05	.02	.08	.07	.05	.07	.10
	ext. margin (hour)	.06	.05	.17	.08	.10	.09	.05	.03	.07	.06	.05	.02	.09
Cross-wage elasticity														
Total hours		-.05	-.03	-.05	-.03	-.04	-.04	-.01	-.01	-.02	-.01	-.01	.02	-.028
		(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)
Total hours (compensated)		-.05	-.03	-.04	-.02	-.04	-.04	.01	-.01	-.02	-.01	-.01	.01	-.026
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.00)	(.01)
Extensive margin (particip.)		-.03	-.01	-.04	-.02	-.02	-.02	.01	.00	-.02	.00	-.01	.01	-.02
		(.01)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.01)	(.00)	(.00)	(.00)	(.01)
Income elasticity														
Total hours		-.0017	-.0001	-.0023	-.0024	-.0056	-.0031	-.0059	-.0019	-.0001	-.0002	-.00002	.0012	-.0028
		(.0003)	(.0000)	(.0002)	(.0004)	(.0005)	(.0003)	(.0006)	(.0003)	(.0000)	(.0000)	(.00001)	(.0000)	(.0004)
Extensive margin (particip.)		-.0008	.0000	-.0019	-.0016	-.0044	-.0022	-.0023	-.0007	.0000	-.0001	-.00002	.0008	-.0019
		(.0002)	(.0000)	(.0002)	(.0003)	(.0004)	(.0002)	(.0003)	(.0001)	(.0000)	(.0000)	(.00001)	(.0000)	(.0003)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.5: Labor Supply Elasticities: Single Women

		AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
		98	98	01	98	98	98	01	98	01	98	98	01	98
Wage elasticity														
Total hours		.14	.29	.59	.13	.21	.18	.12	.25	.18	.41	.39	.37	.67
		(.05)	(.05)	(.08)	(.04)	(.04)	(.04)	(.02)	(.03)	(.05)	(.10)	(.08)	(.09)	(.09)
Total hours (compensated)		.14	.30	.59	.11	.22	.18	.12	.24	.21	.43	.39	.39	.73
		(.05)	(.05)	(.08)	(.04)	(.04)	(.04)	(.02)	(.03)	(.05)	(.10)	(.08)	(.09)	(.09)
Intensive margin (hour)		.01	.00	.07	-.02	.00	.02	.02	.03	.01	-.01	.05	.06	.05
		(.02)	(.01)	(.01)	(.02)	(.01)	(.01)	(.00)	(.01)	(.02)	(.01)	(.01)	(.03)	(.02)
Extensive margin (hour)		.13	.29	.52	.15	.21	.16	.11	.22	.16	.42	.34	.31	.62
		(.03)	(.03)	(.06)	(.01)	(.03)	(.03)	(.02)	(.02)	(.03)	(.10)	(.07)	(.06)	(.08)
Extensive margin (particip.)		.13	.25	.41	.18	.20	.15	.09	.22	.17	.43	.34	.24	.58
		(.03)	(.03)	(.06)	(.01)	(.03)	(.03)	(.02)	(.02)	(.03)	(.10)	(.07)	(.06)	(.08)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.18	.40	1.23	.26	.38	.26	.22	.32	.23	.68	.52	.63	1.33
	ext. margin (hour)	.15	.36	.89	.32	.35	.20	.16	.29	.21	.69	.43	.40	1.23
quintile 2	total hours	.23	.36	.69	.39	.25	.25	.16	.34	.23	.42	.60	.45	.84
	ext. margin (hour)	.19	.28	.43	.44	.24	.18	.11	.29	.21	.42	.54	.28	.70
quintile 3	total hours	.16	.29	.47	.02	.21	.20	.12	.28	.20	.36	.37	.45	.51
	ext. margin (hour)	.14	.25	.33	.08	.20	.15	.06	.22	.15	.37	.31	.24	.38
quintile 4	total hours	.08	.19	.45	.04	.16	.17	.12	.22	.14	.33	.17	.25	.43
	ext. margin (hour)	.10	.17	.32	.07	.15	.14	.09	.19	.14	.35	.15	.17	.37
quintile 5	total hours	.02	.26	.24	.05	.07	.05	.01	.11	.12	.38	.53	.15	.34
	ext. margin (hour)	.09	.22	.17	.10	.09	.09	.04	.14	.15	.40	.47	.14	.32
with children	total hours	.14	.33	.56	.15	.22	.22	.10	.22	.24	.57	.64	.45	.53
no children	total hours	.13	.27	.60	.12	.20	.16	.14	.26	.15	.30	.24	.29	.81
Income elasticity														
Total hours		-.0006	-.0134	-.0038	.0119	.0287	.0005	.0011	.0026	-.0061	-.0102	-.0075	-.0025	.0189
		(.0005)	(.0020)	(.0008)	(.0064)	(.0054)	(.0004)	(.0004)	(.0018)	(.0017)	(.0036)	(.0021)	(.0009)	(.0229)
Extensive margin (particip.)		-.0003	-.0074	-.0016	.0154	.0278	.0026	.0023	.0046	-.0026	-.0092	-.0060	-.0012	.0187
		(.0004)	(.0014)	(.0006)	(.0062)	(.0054)	(.0004)	(.0004)	(.0016)	(.0011)	(.0035)	(.0018)	(.0006)	(.0183)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.6: Labor Supply Elasticities: Single Women (cont.)

		NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05	Mean
Wage elasticity														
Total hours		.16	.08	.13	.20	.40	.31	.27	.21	.12	.08	.09	.23	.248
		(.04)	(.04)	(.04)	(.05)	(.04)	(.05)	(.04)	(.03)	(.04)	(.04)	(.01)	(.01)	(.05)
Total hours (compensated)		.16	.08	.12	.22	.41	.31	.27	.22	.12	.10	.09	.26	.256
		(.04)	(.04)	(.04)	(.05)	(.04)	(.05)	(.04)	(.03)	(.04)	(.04)	(.01)	(.01)	(.05)
Intensive margin (hour)		.02	.04	.00	.04	.04	.04	.03	.06	.01	.01	.01	.03	.02
		(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)	(.00)	(.00)	(.00)	(.00)	(.01)
Extensive margin (hour)		.13	.04	.13	.16	.36	.27	.24	.15	.11	.08	.08	.20	.22
		(.02)	(.03)	(.04)	(.04)	(.03)	(.04)	(.02)	(.02)	(.04)	(.04)	(.01)	(.00)	(.04)
Extensive margin (particip.)		.11	.05	.14	.19	.26	.24	.18	.14	.11	.07	.07	.19	.21
		(.02)	(.03)	(.04)	(.04)	(.03)	(.04)	(.02)	(.02)	(.04)	(.04)	(.01)	(.00)	(.04)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.16	-.02	.15	.37	.45	.38	.36	.27	.12	.14	.10	.22	.37
	ext. margin (hour)	.12	.01	.16	.33	.28	.27	.24	.18	.11	.13	.09	.19	.31
quintile 2	total hours	.23	.02	.13	.23	.48	.38	.37	.30	.13	.08	.09	.34	.32
	ext. margin (hour)	.19	.04	.13	.20	.29	.29	.23	.18	.12	.08	.08	.31	.26
quintile 3	total hours	.17	.03	.15	.16	.47	.38	.30	.23	.12	.07	.09	.27	.24
	ext. margin (hour)	.12	.05	.15	.15	.29	.28	.19	.13	.11	.06	.07	.23	.19
quintile 4	total hours	.18	.10	.11	.15	.47	.33	.24	.18	.13	.07	.08	.21	.20
	ext. margin (hour)	.09	.08	.13	.15	.30	.24	.15	.11	.12	.06	.07	.16	.16
quintile 5	total hours	.07	.23	.10	.12	.24	.15	.11	.07	.11	.07	.08	.15	.15
	ext. margin (hour)	.06	.07	.14	.14	.19	.16	.09	.08	.09	.05	.07	.09	.15
with children	total hours	.12	.07	.13	.26	.39	.35	.23	.21	.12	.09	.09	.24	.27
no children	total hours	.17	.10	.13	.16	.41	.29	.28	.21	.12	.08	.09	.23	.24
Income elasticity														
Total hours		-.0034	-.0002	-.0068	-.0072	-.0047	-.0019	.0241	.0128	.0000	.0094	.0007	-.0040	.0015
		(.0008)	(.0001)	(.0013)	(.0018)	(.0013)	(.0010)	(.0046)	(.0028)	(.0000)	(.0057)	(.0001)	(.0002)	(.0027)
Extensive margin (particip.)		-.0020	-.0002	-.0057	-.0053	-.0017	-.0005	.0243	.0137	.0000	.0095	.0007	-.0030	.0029
		(.0004)	(.0000)	(.0011)	(.0015)	(.0008)	(.0008)	(.0039)	(.0024)	(.0000)	(.0057)	(.0001)	(.0002)	(.0024)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.7: Labor Supply Elasticities: Single Men

		AT	BE	BE	DK	FI	FR	FR	GE	GE	GR	IE	IE	IT
		98	98	01	98	98	98	01	98	01	98	98	01	98
Wage elasticity														
Total hours		.14	.26	.28	.26	.33	.14	.14	.14	.20	.19	.33	.67	.22
		(.05)	(.05)	(.06)	(.08)	(.07)	(.04)	(.03)	(.04)	(.03)	(.08)	(.09)	(.10)	(.11)
Total hours (compensated)		.14	.26	.28	.26	.36	.13	.14	.14	.19	.19	.64	.69	.26
		(.05)	(.05)	(.06)	(.08)	(.07)	(.04)	(.03)	(.04)	(.03)	(.08)	(.09)	(.10)	(.11)
Intensive margin (hour)		.05	.03	-.01	.03	-.01	.02	.02	.01	.01	.05	-.08	.03	.02
		(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Extensive margin (hour)		.09	.23	.29	.23	.33	.12	.12	.14	.19	.14	.41	.65	.21
		(.04)	(.04)	(.05)	(.07)	(.07)	(.03)	(.02)	(.03)	(.02)	(.07)	(.08)	(.09)	(.10)
Extensive margin (particip.)		.08	.23	.27	.27	.34	.11	.12	.17	.21	.15	.43	.62	.22
		(.04)	(.04)	(.05)	(.07)	(.07)	(.03)	(.02)	(.03)	(.02)	(.07)	(.08)	(.09)	(.10)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.16	.54	.53	.31	.83	.12	.14	.21	.30	.16	1.17	1.85	.44
	ext. margin (hour)	.13	.50	.53	.37	.80	.10	.12	.24	.33	.14	1.25	1.74	.42
quintile 2	total hours	.15	.22	.36	.30	.24	.10	.11	.18	.19	.18	.30	.98	.23
	ext. margin (hour)	.12	.19	.37	.35	.26	.09	.11	.21	.22	.15	.40	.88	.23
quintile 3	total hours	.13	.21	.20	.25	.22	.14	.11	.12	.19	.18	.24	.54	.17
	ext. margin (hour)	.08	.18	.19	.29	.24	.11	.10	.15	.22	.15	.31	.47	.17
quintile 4	total hours	.11	.17	.09	.21	.20	.15	.13	.10	.14	.19	.15	.22	.16
	ext. margin (hour)	.04	.15	.07	.23	.23	.12	.11	.13	.16	.15	.21	.20	.16
quintile 5	total hours	.13	.25	.29	.25	.19	.20	.20	.12	.21	.23	.26	.48	.16
	ext. margin (hour)	.06	.19	.30	.17	.23	.13	.14	.14	.14	.17	.42	.46	.17
with children	total hours	.25	.08	.37	.15	.47	.09	.13	.07	.09	.19	.73	.87	.16
no children	total hours	.12	.27	.27	.27	.31	.15	.14	.16	.22	.19	.26	.64	.24
Income elasticity														
Total hours		-.0003	-.003	-.008	.075	.112	.001	-.002	-.006	-.007	-.0002	-.041	-.028	-.003
		(.0002)	(.001)	(.001)	(.052)	(.033)	(.001)	(.001)	(.002)	(.001)	(.0012)	(.005)	(.006)	(.024)
Extensive margin (particip.)		-.0001	-.002	-.005	.077	.104	.001	.000	-.002	-.003	-.0001	-.037	-.021	.000
		(.0001)	(.001)	(.002)	(.049)	(.031)	(.000)	(.000)	(.002)	(.001)	(.0010)	(.005)	(.005)	(.022)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

Table F.8: Labor Supply Elasticities: Single Men (cont.)

		NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	PL 05	US 05	Mean
Wage elasticity														
Total hours		.08	.03	.40	.57	.35	.21	.34	.20	.17	.16	.09	.20	.243
		(.03)	(.04)	(.10)	(.06)	(.07)	(.04)	(.06)	(.03)	(.06)	(.06)	(.01)	(.01)	(.06)
Total hours (compensated)		.08	.03	.40	.58	.39	.20	.34	.25	.17	.16	.17	.23	.268
		(.03)	(.04)	(.10)	(.06)	(.07)	(.04)	(.06)	(.03)	(.06)	(.06)	(.01)	(.01)	(.06)
Intensive margin (hour)		.01	-.02	.02	.09	.02	.01	.03	.03	.00	.01	.00	.02	.02
		(.02)	(.00)	(.01)	(.00)	(.00)	(.01)	(.03)	(.02)	(.01)	(.00)	(.00)	(.00)	(.01)
Extensive margin (hour)		.07	.05	.38	.48	.33	.20	.32	.17	.17	.15	.08	.18	.23
		(.02)	(.04)	(.10)	(.06)	(.07)	(.03)	(.04)	(.02)	(.05)	(.06)	(.01)	(.01)	(.05)
Extensive margin (particip.)		.08	.04	.39	.47	.35	.22	.28	.18	.17	.15	.08	.18	.23
		(.02)	(.04)	(.10)	(.06)	(.07)	(.03)	(.04)	(.02)	(.05)	(.06)	(.01)	(.01)	(.05)
Own-wage elasticity (sub-groups)														
quintile 1	total hours	.15	-.01	.58	.83	.31	.17	.45	.32	.28	.21	n.a.	.21	.43
	ext. margin (hour)	.14	.01	.57	.78	.32	.18	.37	.27	.26	.19	n.a.	.20	.42
quintile 2	total hours	.10	.03	.50	.58	.34	.21	.57	.26	.19	.20	n.a.	.27	.28
	ext. margin (hour)	.09	.04	.48	.38	.34	.21	.41	.21	.17	.20	n.a.	.25	.26
quintile 3	total hours	.08	.01	.33	.58	.36	.22	.39	.20	.16	.21	n.a.	.22	.23
	ext. margin (hour)	.07	.03	.32	.46	.36	.22	.29	.17	.15	.20	n.a.	.20	.21
quintile 4	total hours	.06	.06	.30	.44	.35	.20	.30	.14	.14	.11	n.a.	.18	.18
	ext. margin (hour)	.07	.07	.29	.37	.35	.22	.25	.13	.14	.10	n.a.	.16	.17
quintile 5	total hours	.00	.03	.32	.46	.35	.22	.12	.08	.09	.08	n.a.	.14	.20
	ext. margin (hour)	.04	.06	.32	.40	.36	.26	.15	.11	.13	.07	n.a.	.10	.20
with children	total hours	.22	.15	.54	.57	.61	1.25	.19	.28	.11	.13	.11	.18	.32
no children	total hours	.07	-.01	.37	.57	.32	.14	.35	.19	.17	.17	.08	.20	.23
Income elasticity														
Total hours		-.003	.000	-.007	-.012	-.021	-.005	.042	.023	.000	.061	.000	-.006	.0065
		(.001)	(.000)	(.001)	(.002)	(.005)	(.002)	(.010)	(.008)	(.000)	(.026)	(.000)	(.000)	(.0073)
Extensive margin (particip.)		-.001	.000	-.006	-.012	-.018	-.003	.044	.024	.000	.062	.000	-.005	.0079
		(.001)	(.000)	(.001)	(.002)	(.004)	(.002)	(.009)	(.007)	(.000)	(.026)	(.000)	(.000)	(.0069)

Note: wage (income) elasticities are computed numerically as the responses to a 1% uniform increase in wage rates (unearned income). The intensive margin corresponds to the response in work hours among workers, the extensive margin to the participation response (measured either in % change in work hour: "hour", or in % change in participation rate: "particip."). All elasticities are uncompensated, except when indicated. Bootstrapped standard errors in brackets.

G Robustness Checks

Table G.1 reports estimates for 7 countries where two years of data are available. We give here a detailed account of the 1998-2001 policy changes used for additional exogeneous variation (see Section 4.3 in the paper). The UK has experienced important changes in the income tax schedule, social insurance contributions and council taxes, as well as an increased generosity of income support for the elderly ('minimum income guarantee') and for families with children. The latter have also benefited from the replacement of the family credit by the more generous working family tax credit (WFTC) in 1999, an important reform used in difference-in-difference estimations such as Francesconi and Van der Klaauw (2007). In France, housing benefits have been reformed in 2001 and a refundable tax credit for low-wage individuals was introduced that year in France and Belgium (see Orsini, 2012). In Germany, the year 2001 corresponds to the first step of major income tax reforms, including a widening of the income brackets and tax cuts; child benefits were also raised by more than 20% over the period of interest (Haan and Steiner, 2004). In Sweden, the income tax schedule changed with the introduction of an additional lower income tax bracket; a special local income tax credit for low income earners was introduced in 2001 and child benefits were raised by 25% over the period. In Ireland, substantial cuts in income tax have taken place over 1998-2001, income tax allowances were replaced by deductible tax credits while welfare payment rates have failed to keep pace with overall growth in disposable income (see Callan et al. 2011). The Spanish personal income tax has undergone a dramatic change with the reform of 1999 (reduction in the number of tax brackets from 9 to 6, cuts in the bottom and top marginal tax rates, changes in the treatment of the family dimension through a new system of tax credits).

Results in Table G.1 compare the baseline estimates to those obtained when pooling the two years of data and calculating separate elasticities for each year ("pooled years") or the elasticity for the pooled sample ("pooled, mean elast."). Results are unchanged in most cases. For France, Spain and Ireland, we now find very similar elasticities for the two years, which broadly correspond to the average of the two elasticities obtained from independent estimations.

Table G.2 reports detailed estimates for the extensive specification check described in section 4.3 of the paper. The preliminary check concerns the sensitivity of the results to the way we calculate elasticities. The first row of each panel in Table G.2 corresponds to the baseline, that is, a 7-choice model with quadratic utility and fixed costs, whereby elasticities are obtained by averaging expected hours over all observations (frequency method). The second row reports the average elasticity over the 250 draws used to bootstrap standard errors in the baseline model. The third row shows elasticities obtained with a calibration method.[4] Reassuringly, we see very little differences in the three sets of results. The following rows correspond to specification checks, as explained and commented in Section 4.3 of the paper.

Table G.1: Robustness Checks: Improving Identification by Pooling Years

	BE	BE	FR	FR	GE	GE	IE	IE	SP	SP	UK	UK	SW	SW
	98	01	98	01	98	01	98	01	98	01	98	01	98	01
Women in couple														
baseline	.28	.31	.23	.13	.31	.31	.47	.32	.63	.51	.12	.09	.16	.11
pooled years	.28	.31	.17	.17	.31	.30	.47	.49	.50	.54	.09	.11	.13	.13
pooled, mean elast.	.29		.17		.31		.48		.52		.10		.13	
Men in couple														
baseline	.13	.12	.09	.06	.13	.14	.26	.15	.14	.08	.06	.03	.11	.07
pooled years	.11	.13	.07	.07	.13	.12	.29	.24	.09	.10	.04	.05	.09	.07
pooled, mean elast.	.12		.07		.13		.27		.10		.04		.08	

All values are estimated elasticities obtained by averaging predicted frequencies before and after uniform marginal increases of wage rates. The baseline is the standard result with a 7-choice model with fixed costs estimated on each year separately. The "pooled years" elasticities are obtained by estimating the model on pooled 1998 and 2001 samples and, hence, exploiting exogenous changes in tax-benefit policies over the period. The "pooled, mean elast." is the overall elasticity for the pooled 1998-2001 sample.

[4] The *frequency approach* implies averaging the probability of each discrete choice over all households before and after a change in wage rates or unearned income. The *calibration method*, consistent with the probabilistic nature of the model at the individual level, consists of repeatedly drawing a set of $J + 1$ random terms for each household from an EV-I distribution (together with terms for unobserved heterogeneity), which generate a perfect match between predicted and observed choices (see Creedy and Kalb, 2005). The same draws are kept when predicting labor supply responses to an increase in wages or non-labor income. Averaging individual responses over a large number of draws provides robust transition matrices.

Table G.2: Robustness Checks: Specification

Elasticity	Alternative models		Countries											
	# discrete choices	polynomial order	AT 98	BE 98	BE 01	DK 98	FI 98	FR 98	FR 01	GE 98	GE 01	GR 98	IE 98	IE 01
Total hours	7	2 (baseline)	.34	.28	.31	.30	.13	.23	.13	.31	.31	.62	.47	.32
	7	2 *	.34	.29	.31	.30	.14	.23	.13	.31	.32	.61	.49	.32
	7	2 **	.38	.25	.25	.25	.12	.20	.12	.32	.34	.57	.46	.34
	4	2	.33	.36	.39	.33	.14	.23	.18	.29	.32	.52	.55	.36
	13	2	.36	.28	.34	.29	.14	.23	.15	.31	.31	.56	.47	.31
	7	3	.34	.34	.32	.32	.14	.24	.17	.27	.31	.49	.52	.31
	7	4	.36	.26	.33	.32	.14	.23	.14	.29	.31	.55	.45	.31
	7	2 $	.34	.29	.31	.30	.14	.22	.15	.30	.31	.54	.47	.31
Participation	7	2 (baseline)	.27	.22	.23	.25	.12	.19	.10	.24	.22	.57	.42	.27
	7	2 *	.28	.23	.23	.25	.13	.19	.11	.23	.22	.57	.43	.27
	7	2 **	.33	.21	.20	.19	.11	.16	.10	.25	.25	.54	.37	.26
	4	2	.29	.28	.30	.27	.13	.21	.15	.25	.28	.49	.51	.31
	13	2	.29	.22	.25	.24	.13	.19	.11	.23	.20	.53	.41	.26
	7	3	.28	.27	.24	.27	.13	.20	.13	.23	.23	.49	.48	.28
	7	4	.28	.21	.25	.27	.13	.21	.12	.24	.22	.55	.44	.29
	7	2 $	.27	.22	.23	.25	.12	.18	.12	.23	.21	.51	.41	.26
	# discrete choices	polynomial order	IT 98	NL 01	PT 01	SP 98	SP 01	UK 98	UK 01	SW 98	SW 01	EE 05	HU 05	US 05
Total hours	7	2 (baseline)	.40	.45	.21	.93	.72	.17	.14	.12	.06	.09	.12	.15
	7	2 *	-.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	7	2 **	-.01	-.14	-.03	-.15	.01	-.03	-.06	-.09	-.04	-.04	.01	.04
	4	2	.06	-.09	-.02	-.02	.05	.00	-.07	-.01	-.03	-.02	.03	.01
	13	2	.00	-.10	-.02	-.09	.02	-.04	-.06	-.03	-.04	-.01	.04	.01
	7	3	.14	-.04	.00	.02	.17	.00	-.04	-.06	-.05	-.03	.01	.05
	7	4	.23	-.04	-.01	.07	.22	.03	.00	-.03	-.05	-.06	.03	.05
	7	2 $	.03	-.08	-.01	-.09	.00	-.01	-.05	-.03	-.02	-.02	.03	.01
Participation	7	2 (baseline)	.04	-.08	.00	-.06	.03	-.04	-.07	-.03	-.03	-.03	.04	.01
	7	2 *	-.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	7	2 **	-.02	-.07	-.02	-.14	-.01	-.03	-.04	-.05	-.02	-.03	.01	.04
	4	2	.05	-.07	-.02	-.02	.04	.01	-.05	.00	-.02	-.01	.03	.01
	13	2	.00	-.07	-.01	-.08	.01	-.02	-.02	.01	-.01	-.01	.04	.01
	7	3	.21	-.02	.01	.05	.17	.00	-.01	-.03	-.03	-.03	.01	.04
	7	4	.31	.03	.02	.10	.22	.02	.00	-.02	-.03	-.04	.03	.04
	7	2 $	.02	-.05	-.01	-.07	.00	.00	-.02	.00	-.01	-.01	.03	.01

All values are estimated own-wage elasticities obtained by averaging predicted frequencies before and after uniform marginal increases of wage rates, except:

** Average elasticities over 200 draws of the estimated parameters in their distribution*

*** Elasticities calculated using the calibration method (pseudo-residuals drawn to obtain a perfect match and retained after shock on wage/non-labor income)*

Models' specifications vary with the number of choices in the discretization and the functional form of the utility fonction. We report here the order of the polynomial in consumption and hours (quadratic, cubic or quartic)

$ is the baseline specification with a different addition to improve the flexibility of the model (fixed costs of work are replaced by part-time dummies).

H Assessing Cross-Country Differences in Elasticity Size

Table H.1 reports the elements found in graphical form in Sections 5.1-5.3 of the paper: baseline own-wage elasticities of hours for married women (column 1), elasticities when canceling the role of different mean work hours and wages between countries (column 2), elasticities obtained with a 1% increment in net rather than gross wages (column 3), and the elasticity decomposition used to assess the role of different demographic compositions (column 5-8).

Table H.1: Elasticities Decomposition

	Base	Mean Levels	Net wage	Net +Mean	Decomposition baseline Age	Edu	Kids	Resid	Decomposition net wage Age	Edu	Kids	Resid
AT98	0.34	0.30	0.58	0.52	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.15
Std. Err.	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BE98	0.28	0.31	0.42	0.45	0.00	-0.01	0.03	0.00	0.00	-0.01	0.04	0.04
Std. Err.	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BE01	0.31	0.30	0.44	0.42	0.00	-0.01	0.07	0.05	0.01	-0.01	0.09	0.09
Std. Err.	0.05	-0.02	-0.02	-0.02	-0.02	-0.02	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02
DK98	0.29	0.33	0.37	0.41	-0.00	0.01	0.03	-0.06	-0.00	0.01	0.03	-0.10
Std. Err.	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EE05	0.08	0.68	0.09	0.78	-0.00	0.03	0.08	-0.26	0.00	0.04	0.11	-0.38
Std. Err.	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FI98	0.13	0.20	0.19	0.30	-0.00	0.01	0.02	-0.22	-0.00	0.01	0.02	-0.29
Std. Err.	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FR98	0.23	0.26	0.28	0.32	0.00	-0.02	0.08	-0.03	-0.00	-0.02	0.11	-0.08
Std. Err.	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FR01	0.13	0.15	0.16	0.18	0.00	-0.00	0.00	-0.15	0.00	-0.01	0.00	-0.21
Std. Err.	0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
GE98	0.31	0.27	0.44	0.39	-0.00	-0.00	0.00	0.03	-0.00	-0.00	-0.00	0.10
Std. Err.	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GE01	0.31	0.28	0.46	0.42	-0.00	0.00	0.00	0.09	-0.00	0.00	-0.01	0.18
Std. Err.	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GR98	0.62	1.06	0.72	1.24	0.00	0.02	0.06	0.42	0.00	0.03	0.08	0.41
Std. Err.	0.06	-0.02	-0.02	-0.02	-0.01	-0.01	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02
HU05	0.15	1.04	0.23	1.57	-0.00	-0.01	0.01	-0.12	-0.00	-0.02	0.02	-0.14
Std. Err.	0.02	-0.02	-0.02	-0.01	-0.02	-0.02	-0.01	-0.01	-0.02	-0.02	-0.01	-0.01
IE98	0.47	0.34	0.83	0.60	0.00	0.01	0.05	0.45	0.00	0.02	0.10	0.98
Std. Err.	0.05	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
IE01	0.32	0.26	0.51	0.42	0.00	0.03	0.06	0.07	0.00	0.04	0.11	0.20
Std. Err.	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT98	0.33	0.34	0.39	0.41	0.00	0.01	0.03	0.11	0.00	0.02	0.05	0.10
Std. Err.	0.03	-0.02	-0.03	-0.03	-0.03	-0.02	-0.03	-0.03	-0.02	-0.02	-0.02	-0.03
NL01	0.32	0.26	0.39	0.32	0.00	-0.00	-0.01	0.07	0.00	-0.00	-0.01	0.06
Std. Err.	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PT01	0.14	0.47	0.18	0.59	-0.00	0.02	0.11	-0.12	-0.00	0.03	0.14	-0.20
Std. Err.	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SP98	0.63	0.70	0.77	0.86	0.00	0.02	0.09	0.59	0.00	0.03	0.14	0.71
Std. Err.	0.05	-0.01	-0.01	-0.01	-0.00	-0.01	-0.01	-0.01	-0.01	-0.00	-0.01	-0.01
SP01	0.51	0.55	0.68	0.74	-0.00	0.03	0.10	0.27	-0.00	0.04	0.15	0.34
Std. Err.	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SW98	0.16	0.23	0.20	0.28	-0.00	-0.01	0.04	-0.09	-0.00	-0.02	0.03	-0.14
Std. Err.	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW01	0.11	0.16	0.13	0.18	-0.00	-0.01	0.03	-0.14	-0.00	-0.01	0.03	-0.21
Std. Err.	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
UK98	0.12	0.15	0.17	0.21	-0.00	-0.00	0.06	-0.20	-0.01	-0.01	0.08	-0.25
Std. Err.	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UK01	0.09	0.10	0.12	0.12	-0.00	-0.01	0.02	-0.17	-0.00	-0.02	0.03	-0.22
Std. Err.	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US05	0.14	0.01	0.28	0.02	0.00	0.01	0.05	-0.19	0.00	0.02	0.07	-0.17
Std. Err.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: the table contains own-wage elasticities with standard errors for married women in the baseline (col. 1), in the "mean levels" scenario (col. 2), in net wage increment scenario (col. 3) and in the combination of the two latter (col. 4). The next columns contain the change in elasticities due to different components in the elasticity decomposition following Heim (2007) in the baseline (col. 5-8) and the net wage increment scenario (col. 9-12).

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