SPOUSES WELFARE, LABOUR AND CONSUMPTION DECISIONS IN A COLLECTIVE FAMILY MODEL WITH HOUSEHOLD PRODUCTION

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This paper analyses the determinants of child-care, labour supply and household consumption of spouses, in the framework of a collective family model, with household production. To that end, we specify a stochastic formulation that is estimated jointly for husbands and wives (spouses) for 14 EU countries by using the panel structure that results from the eight waves of the European Community Household Panel-ECHP (1994-2001). The empirical results reported are those drawn from considering fixed individual effects in a panel structure. Moreover, our child-care, labour supply, consumption and intra-household resources distribution estimations depend to a significant extent on a number of economic (wages, non-labour incomes) and socio-demographic (average age of spouses, presence and number of children) variables. Finally, individual welfare of spouses is studied with a random-effects ordered probit model with an error structure that allows for correlations between individual observed characteristics and unobservable effects.

II. 1. INTRODUCTION

International panel data (European Community Household Panel-ECHP, 1994-2001) show important gender differences in the intra-household allocation of time devoted to child-care, on the one hand, and to income, on the other. Thus, with respect to the time that husbands and wives dedicate to caring for children, *Figure II. 3* shows that wives dedicate, on average, three times more than husbands in all EU countries, with Ireland exhibiting the greatest time inequality and Portugal the least. As regards private consumption, we can also note that this is higher for husbands than for wives, again in all European countries, with Luxembourg and Denmark being the member states which exhibit the greatest and the smallest consumption inequalities, respectively (*Table II. 1*).

On the basis of this initial evidence, intra-household allocation in Europe appears to be a relevant topic for analysis, with this, in turn, requiring an adequate theoretical framework in order to properly model it. In response, a collective approach has recently emerged, based on the assumption that intra-household decisions are Pareto-efficient (Chiappori, 1988, 1992; Bourguignon and Chiappori, 1992; Browning *et al*., 1994; Browning and Chiappori, 1998). This approach, which enables us to identify the process of intra-household negotiation through the sharing rule, leads to preferences that depend on economic and socio-demographic variables, in such a way that the distribution of bargaining power within a household may depend on the level of each of these variables.

However, one important drawback of this approach is that the estimation of the sharing rule is generally based on an unsatisfactory definition of leisure, in the sense that a lot of this time is quite possibly devoted to the production of household goods (e.g. caring for children, caring for elderly people, and other domestic tasks). In this line, Gary Becker (1965, 1974a, 1974b) was the first to notice the great amount of non-market time that was spent on other domestic tasks as well as for pure leisure. Apps and Rees (1996, 1997), Chiappori (1997), and, most recently, (Aronsson *et al*., 2001; Groot and Van Den Brink, 1996; Rapoport *et al*., 2003, 2004), all offer excellent examples of how to develop a collective model which includes household production[1] in order to

[1] The literature on household production models has traditionally adopted two approaches. The first specifies a specific functional form for the household production function, from which it derives the allocation equations; for example, Graham and Green (1984) who use a Cobb-Douglas, whereas Kooreman and Kaypteyn (1987) use the indirect translog utility function. The second approach is to

avoid misleading results concerning the intra-family income distribution. According to the first two papers, the Pareto-efficient decision process can be interpreted in such a way that household members agree on some efficient production plan and intra-household distribution of resources. More specifically, household production is introduced by means of an aggregate domestic good, produced using constant returns to scale technology. Subsequently, each member freely chooses his/her bundles, subject to his/her specific budget constraint.

Focusing on this approach, in this paper we analyse the determinants of child-care, labour supply and household consumption in the context of a collective model of labour supply, *à la* Chiappori, in which the family production of a public good is included. To that end, we suppose that each family member is characterised by his/her own utility function assuming that individual preferences are egoistic; that is to say, individual utilities do not depend on the consumption levels of the other family members. On the basis of the Second Theorem of Welfare Economics, Pareto-efficient outcomes can be derived from a two-stage procedure. In the first, we obtain the optimal time that each of the spouses devotes to family production (looking after children), whereas in the second we derive both labour supply and private consumption functions. This theoretical framework is then jointly estimated for husbands and wives in 14 EU countries[2] by using the panel structure resulting from the eight waves of the European Community Household Panel-ECHP (1994-2001). Given that an understanding of both child-care and consumption shared within the family is essential for the evaluation of social policies, our empirical conclusions will hopefully assist in the drafting of policies that have the object of changing the gains allocation within the household.

The rest of the paper is organised as follows. Section *II. 2* presents the theoretical framework, with the data and the empirical specification being described in Section *II. 3.* Section *II. 4* considers the results and policy implications and, finally, Section *II. 5* closes the paper with a summary of the most relevant conclusions.

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specify particular functional forms for the equilibrium conditions of the household production model; for example, Gronau (1980) specifies an equality between the marginal productivity of work at home, the marginal rate of substitution between leisure and income (the reservation wage), and the market wage rate.

[2] In Sweden, there is no data corresponding to child-care, or to income satisfaction and thus it is the only EU 15 country excluded from our empirical analysis.

II. 2. THEORETICAL FRAMEWORK

We consider a two-member household, h = husband and w = wife, where the individual is the unit of analysis of household decisions, and whose direct utility functions do not need to be symmetric and can be written in the following way:

$$U^i = U^i\left(x_i, y, z_i; b_{ij}\right) \qquad i= h, w \qquad j=1, 2, 3$$

Specifically, we choose a utility function of the Stone-Geary type (Stern, 1986), not only because of the simplicity that allows us to obtain demand functions of goods, but also because of its economic coherence, since it gathers consumption subsistence levels in such a way that goods and leisure demand should be higher than the subsistence level.

$$U_i = b_{i1}\log\left(x_i - \bar{x}\right) + b_{i2}\log\left(y^* - \bar{y}\right) + b_{i3}\log\left(z_i - \bar{z}\right) \qquad i=h, w$$

The arguments of the utility function are a composite consumption good x_i, whose price is unity, and which represents all private consumption goods in the economy. y is a public consumption good produced inside the family and non-tradable[3], whose endogenous price p(.) depends on the wages, as well as on some socio-demographic characteristics; z_i is leisure, whose price is its opportunity cost, that is, the market wage. Finally, vector b_{ij} is an individual's socio-demographic characteristics vector, composed of variables that indicate existence and number of children in the

[3] We consider the public good produced within the household as a non-tradable good, which cannot be bought or sold in the market: the household production output can only be exchanged within the household and, as a result, the price of the domestic good is endogenously determined (Apps and Rees, 1996). In this kind of model, we face the problem of considering if the good is or is not tradable. (Aronsson *et al.*, 2001) reject both the unitary and the collective model where household production can be traded. In our case, we consider that the household produced good is non-tradable, in such a way that the price depends on household member's wages (taking into account the opportunity cost of paid employment) and a parameter, called *d*, of socio-demographic characteristics of the individual. This price is defined in a lineal way leading to the following expression: $p = \alpha_o + \alpha_1\omega_h + \alpha_2\omega_w + \alpha_3 d$. This price is endogenous to household decisions and must be estimated as a wage function 0 degree homogenous that could be interpreted as the shadow price of the private consumption good.

family as well as spouses' average age, that capture the cohort effect of wives and their role-changes as older women spend more time working in the household.

Moreover, we assume a strictly concave household production function (*Endnote 1*).

$$y = h(t_h, t_w, a)$$

where t_h and t_w are time husband and wife devote to household work, respectively, while $a = (a_h, a_w)$ is a vector of the characteristics of household members that are important for household production, that is, productivity parameters that depend on the personal characteristics of each spouse (*Endnote 2*). Concretely, household production has a functional form of the Cobb-Douglas type:

$$y(t_h, t_w, a_h, a_w) = k t_h^{a_h} t_w^{a_w} .$$

According to the Second Theorem of Welfare Economics, Pareto-efficient outcomes of the household decision process can be derived from a two-stage procedure.

In the first stage, we determine how the resources are going to be shared within the household in the form of the sharing rule, which depends on the wages (ω_h, ω_w), non-wage incomes (m_h, m_w), and all socio-demographic characteristics of the household (b_{hj}, b_{wj}) j = 1, 2, 3.

The optimal allocation of time to household production (t_h, t_w) is then determined by maximising the following profit function:

$$\max \pi = ph(t_h, t_w, a) - \omega_h t_h - \omega_w t_w = pkt_h^{a_h} t_w^{a_w} - \omega_h t_h - \omega_w t_w$$

where ω_h and ω_w are wages and p(.) is the household produced good price. First order conditions are as follows:

$$\frac{\partial \Pi}{\partial t_h} = pka_h t_h^{a_h - 1} t_w^{a_w} - \omega_h = 0$$

$$\frac{\partial \Pi}{\partial t_w} = pka_m t_h^{a_h} t_w^{a_w - 1} - \omega_w = 0$$

$$t_h = \left(p^{\frac{1}{a_w}} k^{\frac{1}{a_w}} a_w a_h^{\frac{1-a_w}{a_w}} \omega_h^{\frac{a_w-1}{a_w}} \right)^{-\frac{a_w}{a_h+a_w-1}} \omega_w^{\frac{a_w}{a_h+a_w-1}}$$

$$t_w = \left(\frac{\omega_h^{a_h} a_w^{a_h-1}}{pka_h^{a_h} \omega_w^{a_h-1}} \right)^{\frac{1}{a_h+a_w-1}}$$

Once the optimum time that both husband and wife devote to household production is determined, we can replace them in the production function leading to the family production optimum.

$$y^* = \left(\frac{\omega_h^{a_h} \omega_w^{a_w}}{(pk)^{(a_h+a_w)} a_w^{a_w} a_h^{a_h}} \right)^{\frac{1}{a_h+a_w-1}}$$

In the second stage, given the sharing arrangement s_i and the household production plan y^*, each family member obtains their consumption and leisure equilibrium by separately maximising his/her utility, subject to the corresponding budget constraint:

$$MaxU_i = b_{i1} \log\left(x_i - \bar{x}\right) + b_{i2} \log\left(y^* - \bar{y}\right) + b_{i3} \log\left(z_i - \bar{z}\right)$$

s. to. $\quad s_i = x_i + p(\ ) y^* + \omega_i z_i$

with s_i being, as established in the first stage, the individual full income, that is to say, the sharing rule. In the sharing rule specified, we assumed that each individual considers their wage as main income and the individual does not take into account his/her spouse's wage when total income is shared.

$$s_i = x_i + p(\ ) y^* + \omega_i z_i$$

$$s_h = \omega_h T + \alpha\left(m_h + m_w\right)$$

$$s_w = \omega_w T + (1-\alpha)(m_h + m_w)$$

For identification reasons, we need the existence of at least one distribution factor (*Endnote 3*), that is, factors that affect the bargaining position (power) of household members, but not preferences, prices, or budget constraints - for instance, non-labour income (m_h, m_w), age differences and differences in education level of spouses.

$$s = s_h + s_w = (\omega_h + \omega_w)T + m_h + m_w$$

where T is the total number of hours available, ω_h and ω_w are husbands' and wives' wages and m_h and m_w non-labour income of husbands' and wives'. The individual divides his/her total time between leisure, time devoted to look after children (household production) and time supplied in the labour market.

s_i is the part of total family income that belongs to individual i and is decided in the first stage of the decision-making process, when a sharing agreement is reached. $b = (b_{hj}, b_{wj})$ is a personal characteristics vector, and *d* is a vector that describes the opportunity costs of the household member continuing to belong to the household, rather than remaining single or getting divorced. One of the differences from bargaining models that employ game theory is that the threat point that determines each spouse's bargaining power is implicit here (*Endnote 4*).

Within this framework, it is possible to identify the intra-household income distribution with a constant, or a lineal functional form, this last being the alternative selected.

The resolution of these optimization problems allows us to derive the consumption and leisure functions:

$$x_i = x_i\left[\omega_i, s_i(\omega^A, \omega^B, y^A, y^B; b_{ij}), y; b_{ij}\right] \quad i = h, w$$

$$z_i = z_i\left[\omega_i, s_i(\omega^A, \omega^B, y^A, y^B; b_{ij}), y; b_{ij}\right] \quad i = h, w$$

Husband's maximization problem:

$$MaxU_h = b_{h1}\log\left(x_h - \bar{x}\right) + b_{h2}\log\left(y^* - \bar{y}\right) + b_{h3}\log\left(z_h - \bar{z}\right)$$

s. to. $s_h = \omega_h T + \alpha\left(m_h + m_w\right) = x_h + p(\ )y^* + \omega_h z_h$

with the Lagrangian:

$$L_h = b_{h1}\log\left(x_h - \bar{x}\right) + b_{h2}\log\left(y^* - \bar{y}\right) + b_{h3}\log\left(z_h - \bar{z}\right) + \lambda\left[\omega_h T + \alpha\left(m_h + m_w\right) - x_h - p(\ )y^* - \omega_h z_h\right]$$

and first order conditions:

$$\frac{\partial L_h}{\partial x_h} = \frac{b_{h1}}{x_h - \bar{x}} - \lambda = 0$$

$$\frac{\partial L_h}{\partial z_h} = \frac{b_{h3}}{z_h - \bar{z}} - \lambda\omega_h = 0$$

$$\frac{\partial L_h}{\partial \lambda} = \omega_h T + \alpha\left(m_h + m_w\right) - x_h - p(\ )y^* - \omega_h z_h = 0$$

where we obtain (x_h, z_h):

$$x_h = \frac{b_{h1}}{b_{h1} + b_{h3}}\left(\omega_h T + \alpha\left(m_h + m_w\right) - p(\ )y^* + \frac{b_{h3}}{b_{h1}}\bar{x} - \omega_h \bar{z}\right)$$

$$z_h = \frac{b_{h3}}{b_{h1}+b_{h3}}\left(T + \frac{\alpha}{\omega_h}\left(m_h + m_w\right) - \frac{p(\ )y^*}{\omega_h} - \frac{\bar{x}}{\omega_h} + \frac{b_{h1}\bar{z}}{b_{h3}}\right)$$

Wife's maximization/optimization problem:

$$MaxU_w = b_{w1}\log\left(x_w - \bar{x}\right) + b_{w2}\log\left(y^* - \bar{y}\right) + b_{w3}\log\left(z_w - \bar{z}\right)$$

$$\text{s. to. } s_w = \omega_w T + (1-\alpha)\left(m_h + m_w\right) = x_w + p(\ )y^* + \omega_w z_w$$

with the Lagrangian:

$$L_w = b_{w1}\log\left(x_w - \bar{x}\right) + b_{w2}\log\left(y^* - \bar{y}\right) + b_{w3}\log\left(z_w - \bar{z}\right) + \lambda\left[\omega_w T + (1-\alpha)\left(m_h + m_w\right) - x_w - p(\ )y^* - \omega_w z_w\right]$$

and first order conditions:

$$\frac{\partial L_w}{\partial x_w} = \frac{b_{w1}}{x_w - \bar{x}} - \lambda = 0$$

$$\frac{\partial L_w}{\partial z_w} = \frac{b_{w3}}{z_w - \bar{z}} - \lambda\omega_w = 0$$

$$\frac{\partial L_w}{\partial \lambda} = \omega_w T + (1-\alpha)\left(m_h + m_w\right) - x_w - p(\ )y^* - \omega_w z_w = 0$$

where we obtain (x_w, z_w):

$$x_w = \frac{b_{w1}}{b_{w1}+b_{w3}}\left(\omega_w T + (1-\alpha)(m_h + m_w) - p(\ )y^* + \frac{b_{w3}}{b_{w1}}\bar{x} - \omega_w \bar{z}\right)$$

$$z_w = \frac{b_{w3}}{b_{w1}+b_{w3}}\left(T + \frac{(1-\alpha)}{\omega_w}(m_h + m_w) - \frac{p(\ )y^*}{\omega_w} - \frac{\bar{x}}{\omega_w} + \frac{b_{w1}}{b_{w3}}\bar{z}\right)$$

Once we have obtained the functions of productive factors t_h^*, t_w^* leisure z_h^*, z_w^* and Marshallian demands of a representative private consumption good of both spouses x_h^*, x_w^* we introduce them in the direct utility function leading to indirect utility functions of the spouses, or well-being of individuals, that depend on the explanatory variables of the problem.

$$V^h = V^h(\omega_h, \omega_w, m_h, m_w; b_{hj}) = U^h(x_h^*, y^*, z_h^*; b_{hj}) = b_{h1}\log(x_h^* - \bar{x}) + b_{h2}\log(y^* - \bar{y}) + b_{h3}\log(z_h^* - \bar{z})$$

$$V^w = V^w(\omega_h, \omega_w, m_h, m_w; b_{wj}) = U^w(x_w^*, y^*, z_w^*; b_{wj}) = b_{w1}\log(x_w^* - \bar{x}) + b_{w2}\log(y^* - \bar{y}) + b_{w3}\log(z_w^* - \bar{z})$$

II. 3. DATA AND ECONOMETRIC SPECIFICATION

II. 3. 1. Econometric specification

In this section, we develop the empirical specification that, according to the available data, allows us to identify the determinants of child-care, labour supply[4] and consumption distribution in the family decision-making process. As a starting point, we consider that this identification requires two simplifying assumptions. First, the panel data structure allows us to apply techniques that help to control individual unobservable heterogeneity, in such a way that we will suppose linear behaviour functions. Secondly, and as we stated earlier, vector b_{ij} gathers a series of socio-demographic exogenous variables that influence household decisions.

[4] We have not estimated leisure demand functions because ECHP does not provide an adequate measure of leisure time. In this specification, leisure is a residual variable that is built as a difference of total time available less hours of market work, less hours the individual spends looking after children and caring for elderly relatives and thus some domestic tasks such as cleaning, ironing, cooking or gardening could be included in leisure time. We also use labour instead of leisure in order to avoid seasonal effects.

In line with the above, the empirical functions corresponding to child-care time take the following form:

$$t_h = \alpha_{11i} + \alpha_{12}\omega_{it}^h + \alpha_{13}\omega_{it}^w + \alpha_{14}d_{it} + \alpha_{15}a_{it} + e_{1it} \qquad (3a)$$

$$t_w = \alpha_{21i} + \alpha_{22}\omega_{it}^h + \alpha_{23}\omega_{it}^w + \alpha_{24}d_{it} + \alpha_{25}a_{it} + e_{2it} \qquad (3b)$$

where the parameters α_{12} to α_{15} and α_{22} to α_{25} are the coefficients that go with the variables; α_{11i} and α_{21i} are constant for each individual's unobserved characteristics; and, finally, e_{1it} and e_{2it} are the error terms. These equations are estimated jointly, to improve efficiency for both spouses, in such a way that N is the number of couples in the sample.

We estimate jointly labour supply and consumption of husbands and wives, differencing out fixed individual effects.

$$l_h = \beta_{11i} + \beta_{12}\omega_{it}^h + \beta_{13}\omega_{it}^w + \beta_{14}m_{it}^h + \beta_{15}m_{it}^w + \beta_{16}b_{it}^h + \beta_{17}b_{it}^w + \beta_{18}d_{it} + \varepsilon_{1it} \qquad (3c)$$

$$l_w = \beta_{21i} + \beta_{22}\omega_{it}^h + \beta_{23}\omega_{it}^w + \beta_{24}m_{it}^h + \beta_{25}m_{it}^w + \beta_{26}b_{it}^h + \beta_{27}b_{it}^w + \beta_{28}d_{it} + \varepsilon_{2it} \qquad (3d)$$

$$x_h = \beta_{31i} + \beta_{32}\omega_{it}^h + \beta_{33}\omega_{it}^w + \beta_{34}m_{it}^h + \beta_{35}m_{it}^w + \beta_{36}b_{it}^h + \beta_{37}b_{it}^w + \beta_{38}d_{it} + \varepsilon_{3it} \qquad (3e)$$

$$x_w = \beta_{41i} + \beta_{42}\omega_{it}^h + \beta_{43}\omega_{it}^w + \beta_{44}m_{it}^h + \beta_{45}m_{it}^w + \beta_{46}b_{it}^h + \beta_{47}b_{it}^w + \beta_{48}d_{it} + \varepsilon_{4it} \qquad (3f)$$

Finally, we are going to analyse the individual well-being (income satisfaction[5]) of both spouses through the model Mundlak (1978) and Chamberlain (1980) proposed. We are able to identify transitory and permanent effects of well-being determinants, allowing for correlations between individual observed characteristics and individual unobservable effects.

$$v_h = \gamma_{11i} + \gamma_{12}\omega_{it}^h + \gamma_{13}\overline{\omega}_{it}^h + \gamma_{14}\omega_{it}^w + \gamma_{15}\overline{\omega}_{it}^w + \gamma_{16}m_{it}^h + \gamma_{17}\overline{m}_{it}^h + \gamma_{18}m_{it}^w + \gamma_{19}\overline{m}_{it}^w + \gamma_{110}b_{it} + \xi_{1it} \qquad (3g)$$

[5] We use income satisfaction as a proxy for individual well-being. This variable is the answer to the question "How satisfied are you with your present financial situation?" and takes values on a 6 point scale from 1 (not satisfied at all) to 6 (fully satisfied).

$$v_w = \gamma_{21i} + \gamma_{22}\omega_{it}^h + \gamma_{23}\overline{\omega}_{it}^h + \gamma_{24}\omega_{it}^w + \gamma_{25}\overline{\omega}_{it}^w + \gamma_{26}m_{it}^h + \gamma_{27}\overline{m}_{it}^h + \gamma_{28}m_{it}^w + \gamma_{29}\overline{m}_{it}^w + \gamma_{210}b_{it} + \xi_{2it} \quad (3h)$$

II. 3. 2. Data

Bearing in mind that our purpose is to estimate the determinants of child-care, labour supply and consumption functions, (*3a*) to (*3f*), the data used in this work comes from the eight waves of the ECHP (1994-2001) for each of the 14 sample countries[6]. We have selected couples married or cohabiting in which both spouses, aged between 16 and 65 years old, devote time to caring for children. The number of observations varies from 5331 in the Netherlands to 173 in the UK.

We only consider couples where the husband supplies a positive number of working hours. Male's labour supply is quasi-exogenous, and it depends on the competitiveness of the labour market. Female labour supply is for more responsive to changes in wages than male labour supply (Kerkhofs and Kooreman, 2003) and participation in the labour market (*Endnote 5* and *Endnote 6*). The allocation of time is less elastic for males than for females.

In *Table II. 1* we observe the descriptive statistics of dependent variables such as husband's and wives' satisfaction (*SatisfHusband*, *SatisfWife*), husband's and wives' hours of child-care (*ChildCareHusband*, *ChildCareWife*), husband's and wives' hours of work (*LabourSupplyHusband*, *LabourSupplyWife*), and husband's and wives' net available income (*ConsumptionHusband*, *ConsumptionWife*) as a proxy of consumption expenditure[7].

[6] The last wave of each individual is lost since the income variables employed, are referred to the previous year.

[7] Income variables are expressed in €, dividing deflacted national monetary units by PPP rates in order to control for international differences in the cost of living and make consumption bundles comparable between different countries and over time within a country. All income variables are instrumented as they may be endogenous. In demand models, total expenditure is proxied by net personal income (Browning et al., 1994).

Table II. 1. Mean and Std. Deviation of endogenous (dependent) variables

Variable	Austria	Belgium	Denmark	Germany	Greece	Finland	France	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	United Kingdom
SatisfHusband	4.1095	4.1735	4.3924	3.7214	3.3360	3.9145	3.6877	3.7259	3.4607	4.1606	4.5502	3.2258	3.5007	3.6177
	(1.2499)	(1.0878)	(1.0771)	(1.1459)	(1.0475)	(1.1053)	(1.1335)	(1.2681)	(1.1663)	(1.2851)	(0.9500)	(0.9691)	(1.2610)	(1.2374)
SatisfWife	4.0875	4.2341	4.3774	3.6379	3.2300	3.9143	3.7607	3.8510	3.3833	4.2892	4.6245	3.0868	3.4998	3.7512
	(1.3473)	(1.1018)	(1.1439)	(1.2552)	(1.1080)	(1.1876)	(1.1211)	(1.3424)	(1.2086)	(1.2035)	(0.9719)	(1.0181)	(1.2820)	(1.2869)
ChildCareHusband	17.5907	25.3599	30.4691	21.7947	19.5460	22.0785	19.6350	22.3363	18.3559	17.4739	16.6504	21.1875	25.8184	27.0380
	(12.3959)	(23.6866)	(22.9397)	(15.3358)	(10.4064)	(16.7867)	(16.3620)	(15.2188)	(11.7404)	(11.1771)	(11.9133)	(19.6893)	(16.2529)	(20.9137)
ChildCareWife	50.8052	47.0210	50.6637	49.9966	43.5420	47.4658	45.3938	63.4674	41.8232	48.0040	47.5611	37.3125	56.4493	60.2121
	(23.9369)	(27.2304)	(26.2612)	(24.9012)	(17.7816)	(26.9000)	(23.6884)	(23.5691)	(18.9917)	(22.4795)	(23.9083)	(22.7560)	(23.0618)	(25.3074)
LabourSupplyHusband	46.3058	43.8205	41.4932	44.1117	45.2900	45.2650	41.7619	45.9309	41.9973	42.1205	41.5994	44.1592	43.7022	46.1339
	(13.1320)	(9.9307)	(9.6821)	(10.3063)	(12.6001)	(13.1097)	(9.1333)	(13.5383)	(9.5661)	(6.3654)	(9.8202)	(10.0970)	(10.2528)	(11.0277)
LabourSupplyWife	23.0971	26.7732	28.5797	17.8282	20.8220	30.3574	22.1718	18.2930	19.1824	19.3012	13.8196	32.9382	18.8250	22.0871
	(19.7911)	(16.8148)	(15.2166)	(17.4930)	(19.0624)	(17.8867)	(18.3477)	(16.8266)	(18.5933)	(18.0211)	(13.1884)	(17.3677)	(19.4712)	(17.5554)
Husband Net Inc (t-1)	20981.3400	20870.8500	19051.7500	25178.2900	21060.5800	21467.9600	16958.0200	24026.6800	17296.5100	35310.6600	22780.4800	12795.5200	16954.2600	19883.0400
	(13113.6100)	(10663.0900)	(8432.0390)	(21568.8100)	(12478.5900)	(12949.0500)	(10943.1500)	(29553.3800)	(10195.6800)	(19103.6400)	(14287.4200)	(10289.7000)	(11410.4700)	(23708.0200)
ConsumptionHusband	21140.5400	21623.8800	20001.5500	26373.2300	22066.6700	22486.6000	18297.3400	25233.2200	17962.6300	35465.3100	23511.7000	13308.0700	17730.8800	20851.8900
	(11002.1500)	(12022.9400)	(9095.6720)	(22759.1500)	(12510.9500)	(13312.0000)	(12765.6100)	(31057.0600)	(11244.7500)	(19968.9300)	(13723.6200)	(10388.2000)	(10229.6700)	(26593.0900)
Wife Net Inc (t-1)	8961.8460	14225.6300	15475.3000	17370.8000	11462.5400	8002.0440	7671.3310	9090.6610	7350.3820	15147.2200	6345.2080	7956.6860	6951.7350	10261.6400
	(8323.5090)	(10121.0100)	(6648.5260)	(13282.3700)	(9097.4390)	(7372.9960)	(8932.5230)	(8257.3400)	(8007.2020)	(20587.2700)	(7720.3700)	(7651.0770)	(8442.3430)	(16074.5800)
ConsumptionWife	8689.8700	14241.7600	16055.8400	18176.7600	11648.4900	8182.5390	7703.5000	9252.5290	7318.0930	8485.4250	6392.9220	8110.9590	7242.5320	10138.5300
	(7260.7030)	(10038.0600)	(7004.6090)	(14445.4300)	(9078.3010)	(7901.5160)	(12880.9300)	(8304.1040)	(8009.6470)	(13600.9400)	(7875.1330)	(7641.4650)	(8679.4940)	(10853.9500)
SharingRule	0.2165	0.3188	0.3452	0.1276	0.1829	0.4516	0.2772	0.2099	0.1933	0.1290	0.1521	0.2581	0.1777	0.1365
	(0.2083)	(0.2170)	(0.2155)	(0.1879)	(0.2228)	(0.3250)	(0.2216)	(0.2109)	(0.2291)	(0.2416)	(0.1799)	(0.2461)	(0.2300)	(0.1910)

In *Appendix II* we find the descriptive analysis (Mean and Standard Deviation) of the labour characteristics of male and female that we use to instrument each spouse's wages[8]. That is, education level attained (*PrimaryEducHusband*, *SecondaryEducHusband*, *HigherEducHusband*, *PrimaryEducWife*, *SecondaryEducWife*, *HigherEducWife*), seniority at the firm (*SeniorityHusband 1* to *SeniorityHusband 4* and *SeniorityWife 1* to *SeniorityWife 4*), professional experience since first job (*ExperienceHusband*, *ExperienceHusbandSquared*, *ExperienceWife*, *ExperienceWifeSquared*), firm size (*FirmSizeHusband 1* to *FirmSizeHusband 7* and *FirmSizeWife 1* to *FirmSizeWife 7*), occupation or principal activity performed (*OccupHusband G1* to *OccupHusband G9* and *OccupWife G1* to *OccupWife G9*), private versus public sector (*PublicSectorHusband*, *PrivateSectorHusband* and *PublicSectorWife*, *PrivateSectorWife*), and, finally, activity sector distinguishing between agriculture (*AgricultureSectorHusband*, *AgricultureSectorWife*), industry (*IndustrySectorHusband*, *IndustrySectorWife*) and services (*ServiceSectorHusband*, *ServiceSectorWife*).

In *Tables II. 2a*, *II. 2b* and *II. 2c* we present descriptive statistics of exogenous socio-demographic variables for each of the partners and the household, such as age (*AgeHusband*, *AgeWife*), age squared divided by 100, (*AgeHusband*^{2}*/100*, *AgeWife*^{2}*/100*), average age of the couple (*AgeAverage*), family size (*FamilySize*), a dummy that indicates whether there is in the household at least one child under 12 (*Child<12*), the number of children under 16 in the household (*Children<16*), distribution factor (*DistribFact*) and household production (*HouseholdProduction*). In *Table II. 2b* we have hourly wages and those wages already instrumented (*WageHusband, WageWife*; *ExogWageHusband, ExogWageWife*). We select couples in which the husband is employed but wife's labour market situation can be either unemployed, inactive or employed (*UnemployedWife*, *InactiveWife*, *EmployedWife*). We also include hours husband and wife devote to care for the elderly

[8] We follow (Groot and Van den Brink, 1996; Fortin and Lacroix, 1997; Chiappori *et al*., 2002; Fernández-Val, 2003; Crespo, 2005) in order to instrument each spouse's wages. First ones instrument wages considering the education level, a polynomial in age and employment status and, second ones with dummy variables of schooling, a polynomial of degree 3 on age and its interactions with schooling variables, and a measure of years worked in the current job.

(*ElderlyCareHusband*, *ElderlyCareWife*) and the number of leisure hours enjoyed as a residual variable (*LeisureHusband*, *LeisureWife*). In *Table II. 2c* we observe income variables and the corresponding variables lagged a period, such as non-labour incomes of husbands and wives (*Non-labourHusband*, *Non-labourWife*).

Table II. 2a. Mean and Std. Deviation of explanatory (exogenous) variables

Variables	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	United Kingdom
AgeHusband	37.8298	38.6953	37.7917	38.3734	36.8821	38.3909	40.8240	39.6695	40.8940	38.3052	41.2928	35.7849	37.4518	37.6563
	(7.2608)	(6.7501)	(7.1613)	(7.0938)	(6.8931)	(6.7747)	(7.1414)	(7.3248)	(7.4954)	(6.4928)	(6.8164)	(7.7422)	(6.3191)	(7.0383)
AgeWife	35.2257	36.3879	35.1685	36.4410	34.2351	35.8832	36.5640	37.4260	37.6792	35.3775	38.7145	33.2421	35.0346	35.4063
	(6.9197)	(6.4954)	(6.6083)	(6.8068)	(6.3587)	(6.0905)	(6.0689)	(6.7447)	(7.2827)	(5.9995)	(6.6127)	(7.2950)	(6.0631)	(6.2280)
AgeHusband^2/100	14.8378	15.4285	14.7948	15.2282	14.0779	15.1972	17.1750	16.2730	17.2849	15.0928	17.5155	13.4046	14.4256	14.6742
	(5.7645)	(5.5562)	(5.7710)	(5.7100)	(5.3739)	(5.4514)	(6.1014)	(6.0026)	(6.3851)	(5.0384)	(5.7187)	(6.1346)	(4.9152)	(5.4729)
AgeWife^2/100	12.8871	13.6623	12.8048	13.7426	12.1246	13.2466	13.7368	14.4617	14.7275	12.8742	15.4254	11.5822	12.6417	12.9230
	(5.1806)	(5.0675)	(4.9612)	(5.1550)	(4.5950)	(4.5853)	(4.5346)	(5.1763)	(5.7817)	(4.2832)	(5.1999)	(5.3610)	(4.3941)	(4.5538)
AgeAverage	36.5278	37.5416	36.4801	37.4072	35.5586	37.1370	38.6940	38.5477	39.2866	36.8414	40.0037	34.5135	36.2432	36.5313
	(6.7906)	(6.4035)	(6.5066)	(6.7127)	(6.2793)	(6.1601)	(6.2567)	(6.7968)	(7.1621)	(5.9702)	(6.4829)	(7.2084)	(5.9074)	(6.2187)
FamilySize	4.2636	3.9133	3.9468	4.1690	3.9568	3.9347	3.8860	4.6467	3.8776	4.0482	4.0380	4.0243	3.9393	4.0402
	(1.2425)	(0.9020)	(0.9240)	(1.0487)	(0.9169)	(0.9203)	(0.7444)	(1.2953)	(0.8977)	(0.8922)	(0.8334)	(1.2648)	(0.9739)	(0.8661)
Child<12	0.8575	0.6497	0.9261	0.8990	0.9514	0.8196	0.8380	0.9121	0.7785	0.8514	0.7239	0.9408	0.9353	0.9085
	(0.3496)	(0.4773)	(0.2616)	(0.3014)	(0.2150)	(0.3847)	(0.3688)	(0.2832)	(0.4153)	(0.3564)	(0.4471)	(0.2361)	(0.2461)	(0.2887)
Children<16	1.7396	1.7268	1.8358	2.0097	1.8326	1.7139	1.6200	2.2828	1.4293	1.7631	1.6707	1.5934	1.6625	1.8527
	(0.8636)	(0.9186)	(0.8679)	(0.9874)	(0.8472)	(0.8756)	(0.6576)	(1.0618)	(0.8201)	(0.7906)	(0.9731)	(0.8011)	(0.7073)	(0.7423)
HouseholdProduction	28.0765	31.6786	37.1573	31.1756	28.0389	30.0388	27.5017	35.2349	26.4570	27.1862	26.4099	26.9154	36.0895	37.4250
	(13.5488)	(21.9127)	(21.3983)	(15.6782)	(10.6806)	(16.8983)	(15.9694)	(14.7340)	(12.1094)	(12.3273)	(12.4046)	(19.0504)	(15.2477)	(19.5159)
DistribFact	0.1190	0.1095	0.1416	0.0776	0.0257	0.2035	0.0669	0.0617	0.0195	0.0536	0.0253	0.0285	0.0250	0.0915
	(0.1642)	(0.1097)	(0.1366)	(0.0986)	(0.0720)	(0.1677)	(0.1067)	(0.0782)	(0.0672)	(0.0888)	(0.0710)	(0.0852)	(0.0818)	(0.1137)

Table II. 2b. Mean and Std. Deviation of explanatory (exogenous) variables

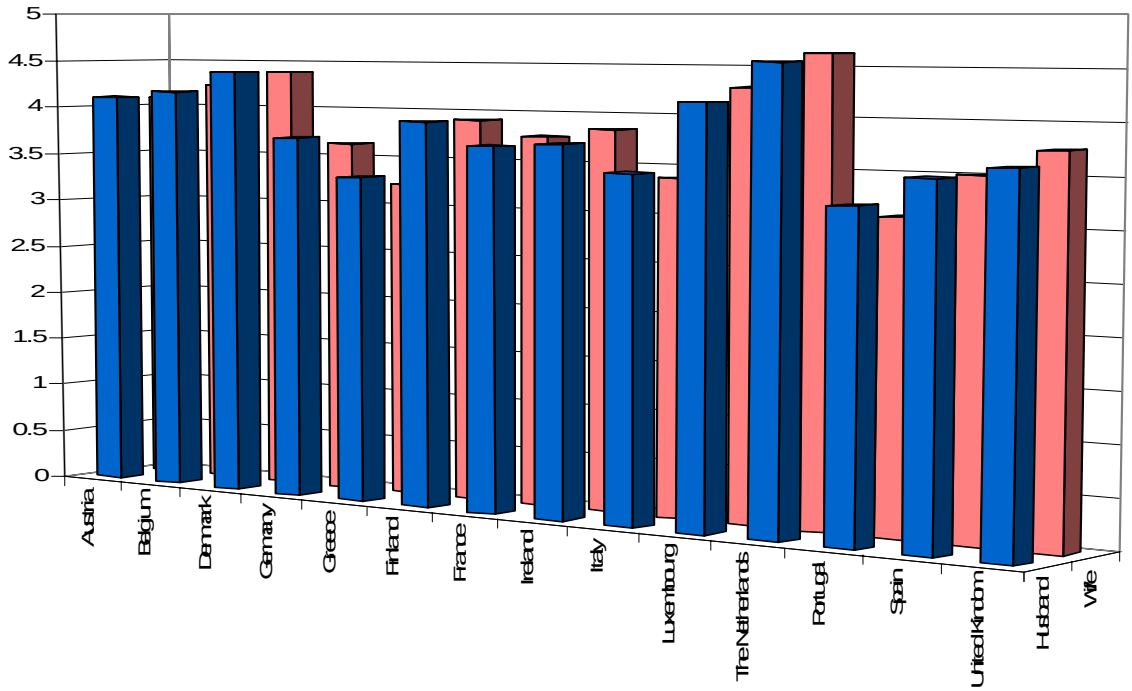
Variables	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	United Kingdom
WageHusband	7.3169	7.9682	7.6101	8.9373	8.1183	4.9457	6.4799	8.9869	7.1503	9.4477	8.7706	4.8924	6.6062	3.8553
	(5.5483)	(5.9286)	(5.4604)	(8.4233)	(6.8718)	(6.5463)	(5.9067)	(12.6422)	(5.7176)	(12.2354)	(8.9785)	(5.0291)	(5.7677)	(7.3012)
WageWife	3.1614	5.6434	5.2347	5.3520	4.3910	2.0116	3.2915	4.1408	3.4075	2.7312	4.5958	3.1734	3.0170	2.4379
	(4.3740)	(5.3286)	(4.8253)	(6.8313)	(5.3095)	(4.9668)	(6.0842)	(5.7272)	(4.9276)	(6.5786)	(7.6704)	(4.0428)	(4.8482)	(4.5730)
ExogWageHusband	7.1499	7.8859	7.2191	8.4891	7.8963	4.8987	6.4465	8.4868	6.9614	9.6260	8.7706	4.7965	6.4456	3.8978
	(1.7490)	(1.5314)	(1.2776)	(2.7447)	(2.9222)	(1.5717)	(1.9942)	(2.4294)	(1.9682)	(3.0404)	(2.4287)	(2.4513)	(2.4286)	(1.8960)
ExogWageWife	3.3364	5.4471	5.1909	5.3291	4.4670	2.3811	3.9527	5.5783	3.9234	3.3641	5.2263	3.1872	3.7078	2.8523
	(2.2450)	(1.6981)	(2.1186)	(2.7742)	(3.1201)	(1.4409)	(3.0480)	(3.4855)	(3.1030)	(2.6352)	(3.0308)	(2.6996)	(3.3711)	(1.7243)
UnemployedWife	0.0187	0.0622	0.0722	0.0544	0.0680	0.0455	0.0600	0.0089	0.0349	0.0000	0.1517	0.0592	0.0684	0.0045
	(0.1354)	(0.2416)	(0.2589)	(0.2268)	(0.2518)	(0.2086)	(0.2377)	(0.0940)	(0.1836)	(0.0000)	(0.3588)	(0.2361)	(0.2524)	(0.0667)
InactiveWife	0.3186	0.1331	0.1110	0.1562	0.2465	0.3411	0.3660	0.4130	0.4044	0.4297	0.3369	0.1243	0.4246	0.3170
	(0.4660)	(0.3398)	(0.3142)	(0.3631)	(0.4310)	(0.4743)	(0.4822)	(0.4925)	(0.4908)	(0.4960)	(0.4727)	(0.3301)	(0.4944)	(0.4658)
EmployedWife	0.6628	0.8039	0.8164	0.7890	0.6849	0.6125	0.5740	0.5781	0.5607	0.5703	0.4889	0.8158	0.5070	0.6696
	(0.4729)	(0.3973)	(0.3872)	(0.4081)	(0.4646)	(0.4874)	(0.4950)	(0.4940)	(0.4963)	(0.4960)	(0.4999)	(0.3878)	(0.5000)	(0.4709)
ElderlyCareHusband	0.2908	0.5797	0.4012	0.5558	0.3340	0.2249	0.1822	0.5758	0.7003	0.4618	0.4246	0.3204	0.3915	0.6473
	(2.1371)	(5.3649)	(4.8415)	(3.8270)	(2.2308)	(2.6994)	(1.5898)	(3.4583)	(3.6469)	(2.1978)	(3.3068)	(2.2316)	(3.0573)	(5.0537)
ElderlyCareWife	1.1115	1.0911	0.5884	1.2543	1.3580	0.3936	0.2793	1.6485	1.5591	0.6305	0.8742	0.9309	1.6279	0.9509
	(5.6664)	(8.3249)	(5.5800)	(6.4481)	(5.8848)	(3.2441)	(2.6668)	(8.3056)	(6.5779)	(3.0174)	(4.8658)	(6.0317)	(8.8543)	(6.2682)
LeisureHusband	85.3082	81.0033	79.1329	83.8998	84.7140	82.4081	89.7399	80.8763	90.1481	91.0956	92.7055	84.8862	80.6667	75.7933
	(20.4842)	(26.1066)	(24.6702)	(19.5245)	(18.8325)	(22.6139)	(19.4816)	(22.2509)	(17.7203)	(12.5167)	(15.9151)	(22.3956)	(20.2692)	(24.3796)
LeisureWife	83.8648	82.9403	76.8279	91.8601	93.9492	77.7529	91.2975	77.4022	97.7656	92.3438	100.2276	83.8480	83.6607	75.9964
	(30.8117)	(32.7896)	(31.1290)	(25.9347)	(25.7449)	(29.6751)	(27.6568)	(28.4381)	(28.2220)	(26.0828)	(25.4104)	(28.3748)	(28.0183)	(28.5394)

Table II. 2c. Mean and Std. Deviation of explanatory (exogenous) variables

Variables	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	United Kingdom
Family Net Inc (t-1)	32148.9700	35566.9500	34849.2400	29765.7600	31459.4900	30158.2900	25440.8000	34542.3800	25873.8200	52019.9100	29941.0300	22506.9800	24835.3500	31040.4900
	(16200.2900)	(15005.8500)	(11323.9600)	(16695.9300)	(14845.9800)	(14780.9700)	(16260.3800)	(30137.8300)	(14217.5600)	(28260.3500)	(16472.5400)	(15151.8800)	(15099.7200)	(29479.8700)
Family Net Inc	32465.8800	36559.5000	36423.2700	30984.8000	32552.9400	31418.5100	26760.5000	36274.1500	26636.7300	45282.0300	30766.3100	23140.9500	25830.0400	32187.1200
	(14328.9300)	(16414.2800)	(12182.0800)	(17635.9300)	(14286.7800)	(15604.2000)	(19062.7400)	(31578.6600)	(15159.1000)	(24383.7200)	(15669.3200)	(15057.4100)	(14536.2000)	(30681.2500)
Husband Labour Inc (t-1)	18502.9500	19030.3300	18115.5400	22642.9500	18668.0800	20425.9300	16069.3300	23084.4200	16367.7800	30749.8500	20843.2800	12157.9800	16175.9000	18996.2700
	(12014.8800)	(9346.2490)	(8734.3750)	(13754.4900)	(11788.2300)	(12489.6700)	(9316.6940)	(29609.9500)	(9373.7870)	(16555.7700)	(14178.8300)	(10064.3900)	(9902.4330)	(22300.5200)
Husband Labour Inc	18788.4000	19807.4300	19159.6800	23876.1900	19476.0600	21361.5400	17185.6100	24433.1300	16903.1500	25624.8400	21523.1500	12562.2600	17072.5300	19964.9000
	(10234.5400)	(10916.9600)	(9096.5880)	(14498.3400)	(11817.0100)	(12348.2900)	(10876.5500)	(30868.1200)	(9617.7500)	(23398.0300)	(13600.7100)	(10067.7600)	(10009.1900)	(23864.2300)
Wife Labour Inc (t-1)	5487.4270	10259.4600	11036.8700	11855.6100	9646.9330	6025.4290	7054.4030	7375.8030	6800.4660	12807.3000	5658.2520	7468.1450	6453.4890	8137.0350
	(6610.3710)	(8332.6640)	(7701.7700)	(11349.6600)	(9107.9910)	(7376.0430)	(8788.2540)	(8382.6740)	(7704.4800)	(20401.5300)	(7587.3430)	(7523.5390)	(8282.3800)	(16230.6500)
Wife Labour Inc	5598.1010	10403.2200	11738.8000	12755.2700	9956.7310	6113.2770	7058.3640	7461.3730	6771.5920	6129.3660	5698.9290	7630.4910	6787.1350	8076.2940
	(6654.5580)	(8149.9090)	(8017.2370)	(11913.2300)	(9003.1310)	(7931.0050)	(12850.6500)	(8405.2940)	(7746.5280)	(12080.5600)	(7721.3940)	(7640.4540)	(8562.0800)	(11058.1700)
Family Labour Inc (t-1)	25402.9500	29596.6500	29342.7700	34706.1700	28464.6900	26795.9400	23467.8400	31447.6200	23928.1500	44316.0000	27096.6900	20749.2200	22938.4700	27779.2600
	(14455.4200)	(12135.0800)	(12369.7800)	(19991.3600)	(16147.4000)	(14194.6100)	(14212.3800)	(30284.6500)	(12865.6800)	(26293.4200)	(16395.0300)	(14840.2600)	(13914.9500)	(28241.2900)
Family Labour Inc	26029.9100	30673.5000	31103.8300	36811.3100	29571.9700	27854.6700	24499.3400	33226.2000	24550.1600	34980.5800	27843.9600	21228.4800	24131.4900	28741.5500
	(13491.2200)	(13559.3200)	(12649.5700)	(20848.1100)	(16044.3000)	(14674.8900)	(17140.0000)	(31396.9200)	(13289.5900)	(29410.3800)	(15564.7700)	(14772.6700)	(14275.1200)	(27599.5600)
Non-LabourHusband (t-1)	2478.3900	1840.5220	936.2137	2535.3430	2392.5010	1042.0340	888.6944	942.2605	928.7348	4560.8060	1937.1970	637.5467	778.3625	886.7681
	(4909.8780)	(5425.3400)	(2442.5830)	(16331.2700)	(3668.4020)	(2638.9580)	(3339.2840)	(2645.1140)	(3074.5760)	(8866.8260)	(2307.0990)	(1475.7610)	(5624.0870)	(2866.6840)
Non-LabourHusband	2352.1330	1816.4460	841.8770	2497.0370	2590.2450	1125.0650	1111.7310	800.0929	1059.4780	9953.6780	1988.5480	745.8013	658.3594	886.9928
	(3704.0800)	(4636.9150)	(3040.0050)	(17421.9700)	(3755.2760)	(3379.02809	(4284.5270)	(2437.8760)	(4730.5460)	(13309.0600)	(2337.7600)	(1875.5660)	(2522.3740)	(3487.6890)
Non-LabourWife (t-1)	3474.4190	3966.1640	4438.4240	5515.1900	1815.6110	1976.6160	616.9284	1714.8580	549.9164	2339.9190	686.9558	488.5402	498.2461	2124.6030
	(5994.2170)	(6106.0170)	(3984.2780)	(8179.6580)	(3187.4920)	(2346.9790)	(1628.0830)	(2168.9980)	(2162.3790)	(3907.8510)	(1830.2980)	(1552.2720)	(1690.8470)	(2420.8810)
Non-LabourWife	3091.7690	3838.5370	4317.0380	5421.4890	1691.7560	2069.2620	645.1359	1791.1570	546.5008	2451.9440	693.9931	480.4674	455.3975	2062.2320
	(3936.4360)	(6134.2860)	(4013.5010)	(8999.6150)	(3338.4520)	(2279.6740)	(1729.5320)	(2131.6810)	(2115.2720)	(7228.6650)	(1860.5780)	(1383.8170)	(1510.6410)	(2423.0440)
Family Non-Labour Inc (t-1)	6746.0160	5970.2970	5506.4660	-4940.4110	2994.8010	3362.3560	1972.9540	3094.7570	1945.6680	7703.9150	2844.3480	1757.7620	1896.8810	3261.2370
	(8108.0190)	(8909.2510)	(5259.5910)	(15763.4800)	(5656.0660)	(4523.7900)	(4930.3140)	(4337.5830)	(4981.7050)	(10402.1600)	(3180.8900)	(3078.8260)	(6375.6230)	(4564.7550)
Family Non-Labour Inc	6415.9060	5879.4620	5319.4370	-5826.5150	2974.5080	3556.7630	2261.1640	3047.9160	2083.1890	10420.6800	2922.3500	1878.2380	1699.3960	3385.3720
	(6235.2880)	(8819.8720)	(5599.8290)	(16603.8800)	(6007.1820)	(5034.6460)	(6070.3950)	(4226.7240)	(6208.3570)	(20729.1600)	(3209.1570)	(3574.8350)	(4082.6160)	(5564.2730)

Regarding satisfaction, Greece, Italy, Portugal and Spain are those countries where lower satisfaction levels are declared. Germany, Finland, France, Ireland and the UK are somewhat higher, but not at the highest level. Husband's declare higher satisfaction levels in the Netherlands, and also in Austria, Belgium, Denmark and Luxembourg. Wives declare higher satisfaction levels in the Netherlands but also in Austria, Belgium, Denmark and Luxembourg. Satisfaction declared is very similar in average, perhaps because of our sample selection where both are married and look after children.

Figure II. 1. Income satisfaction husbands and wives report

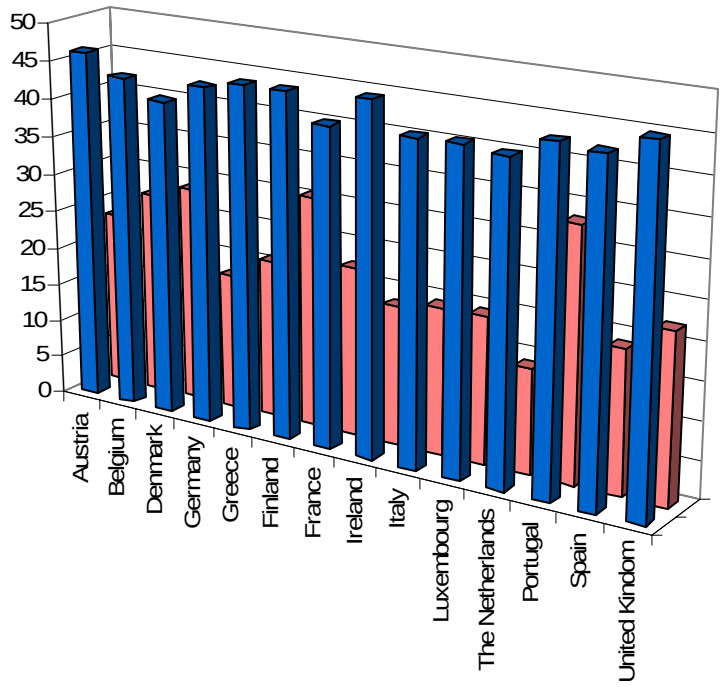


Regarding time allocation, the female partner in the traditional household allocates little or no time to market work, suggesting that she allocates much more time to work and child care at home than the female partner in the non-traditional household. The two household types have similar work-leisure preferences, but make different market and domestic goods choices in response to price variation in the latter due to differences in domestic human capital (Apps and Rees, 1996; McElroy 1990).

We have observed, throughout the 1980's and 1990's, that each year the labour supply of women more closely resembles that of men (Van Klaveren *et al*., 2006).

Husbands on average work more than 40 hours in all countries, those countries where husbands work 45 or more hours being Austria, Greece, Finland, Ireland and the United Kingdom. Those countries in which wives supply a significant amount of labour in the market are Belgium, Denmark, Finland and Portugal.

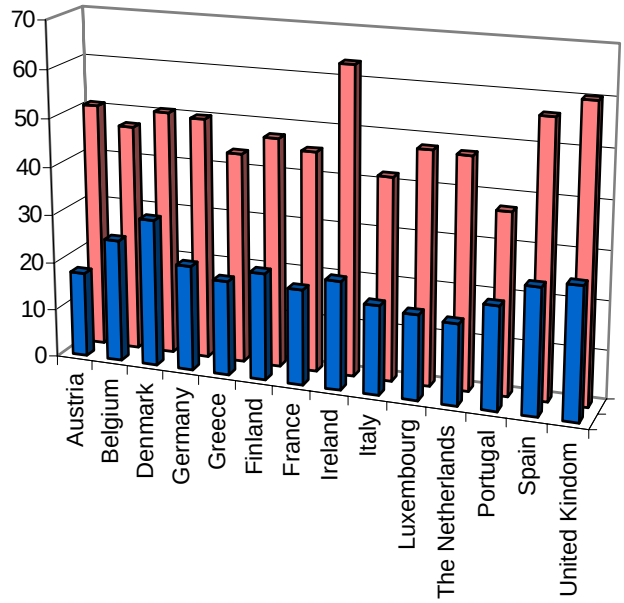
Figure II. 2. Hours of labour market work of husbands and wives



There is a much different behaviour of wives between countries, which leads us to consider what occurs with time allocation within each country (see *Figure II. 3* and from *Figures A. II. 2. a* to *2. n*). There exist differences of 25 or more hours of market work between husbands and wives in Germany, Ireland, the Netherlands and Spain.

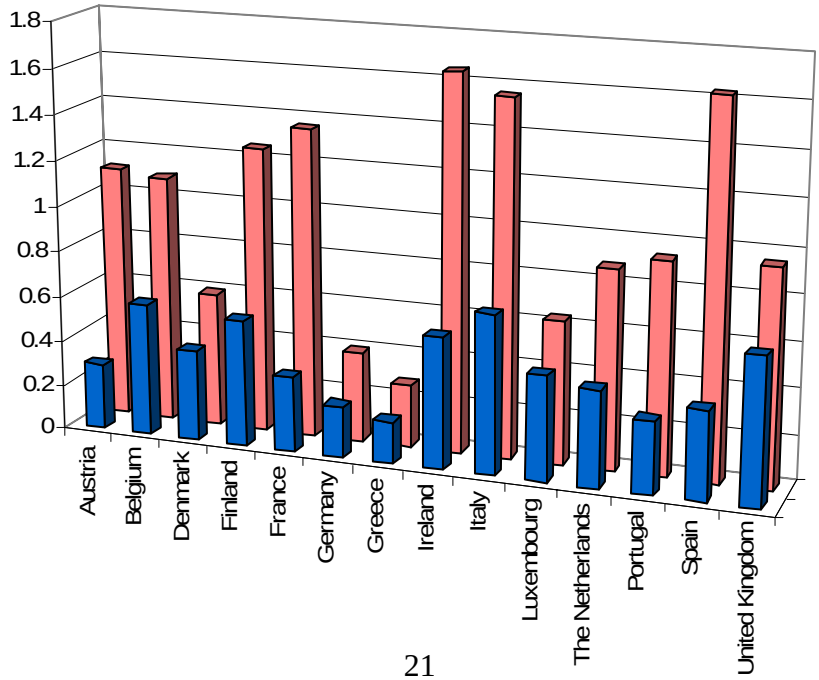
In every country the wife spends more hours looking after children (*Figure II. 3* or *Table II. 1*). The greatest differences between husbands and wives are found in Austria, Ireland, the Netherlands, Spain and the United Kingdom, while there is little difference in Portugal. Husbands care for their children 20 hours or less in Austria, Greece, France, Italy, Luxembourg and the Netherlands, whereas the wife looks after the children for 50 hours or more in Austria, Denmark, Germany, Ireland, Spain and the United Kingdom. International differences in household time are much smaller for women than for men (Juster and Stafford, 1991; Gronau, 1980).

Figure II. 3. Hours husbands and wives devote to child-care



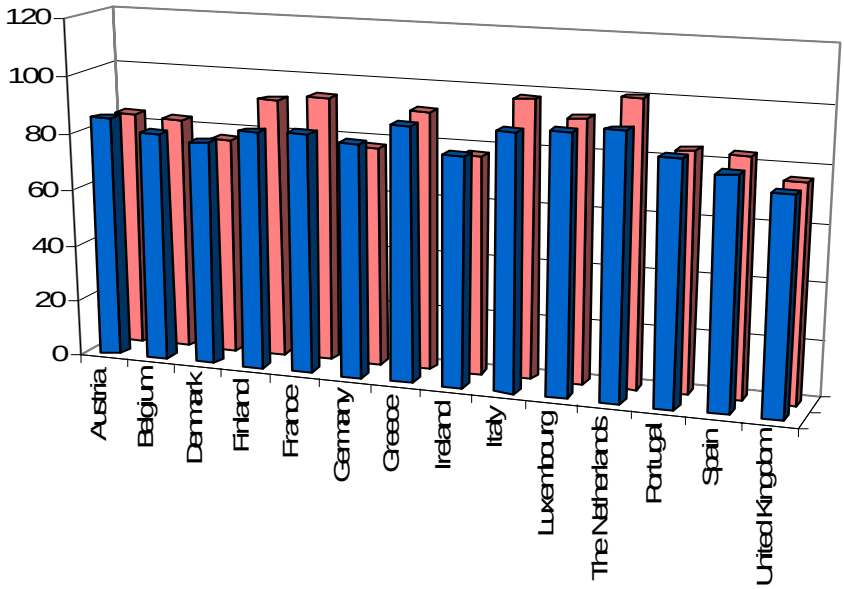
In every country, wives care more for the elderly than do their husbands, with the greatest differences between husbands and wives in France, Ireland and Spain. Wives spend significant hours looking after elderly relatives in Ireland, Italy and Spain (the religion effect), but considerably less in Denmark, Germany and Greece.

Figure II. 4. Hours husbands and wives devote to elderly-care



Some studies observe that wives substitute hours of work by household production time, but husbands tend to substitute those hours of work in the labour market by leisure. We cannot define this very clearly, since other domestic tasks are gathered in our leisure hours (such as cleaning, ironing, gardening, etc …). This perhaps explains why, in most of the countries, women declare that they enjoy more leisure. We observe very low differences regarding leisure between husbands and wives, which indicates to us a preference for joint/shared leisure[9] (*Figure II. 5*). In Austria, Denmark, Germany, Ireland and Portugal, husbands declare they enjoy more leisure hours, whereas Finland, France, Greece, Italy and the Netherlands are countries with the highest differences in favour of wife's leisure.

Figure II. 5. Husbands and wives' hours of leisure



When we observe time allocation within each country (*Figures A. II. 2. a* to *2. n*) we find that women work less but spend more hours looking after the children. At a

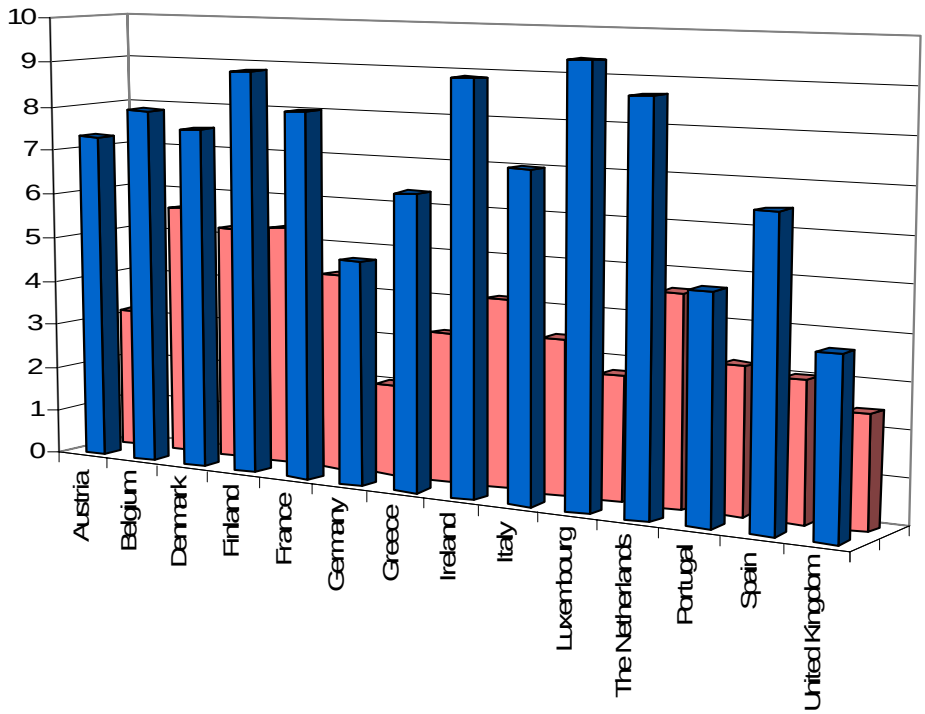
[9] From *Figures A. II. 2. a* to *2. n* we observe that there is some leisure hours household members would spend on their own but some of them jointly. Evidence regarding shared leisure preference is found in literature when studying older couples and their incentives of joint retirement (Gustman and Steinmeier, 2001/2002; García *et al*., 2005; Jiménez-Martín, Labeaga and Vilaplana, 2006; Michaud and Vermeulen, 2004).

given hours-worked, women spend more hours looking after the children than do husbands. This is contrary to the roles substitution theory of Rapoport and Sofer, 2004, who found that when one spouse works in the labour market, the other works more at home, independent of the gender considered.

In *Figure II. 6* we show the hourly wage rate, that is, annual total net income from work, divided by hours worked. Husband's highest wage is found in Luxembourg (9.45 €) and it is high in Finland, France, Ireland and the Netherlands. The highest wife's wage is found in Belgium (5.64 €) but higher wages are also found in Denmark, Finland and the Netherlands. The greatest differences between husbands and wives are found in Austria, Ireland, Luxembourg and the Netherlands.

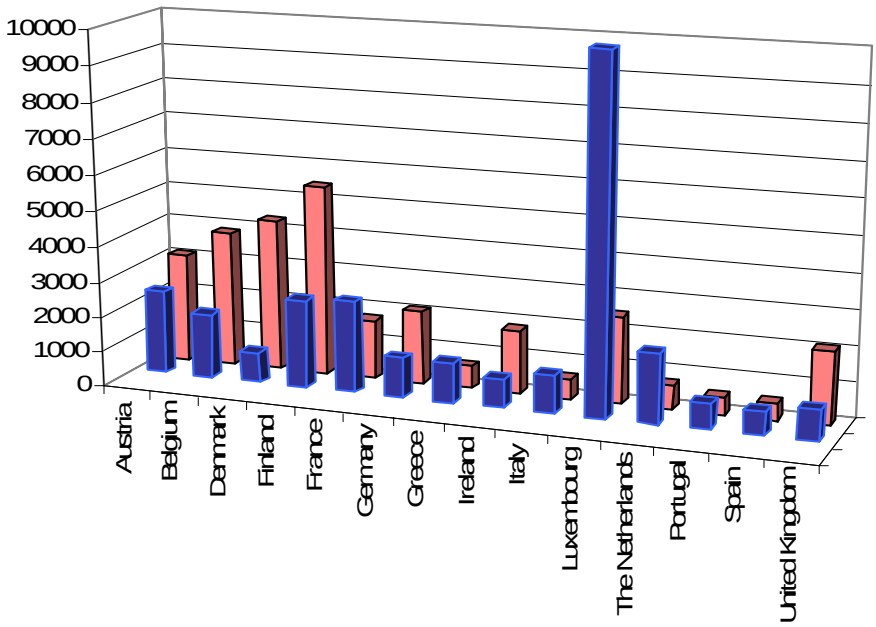
Higher husband's net income values are found in Luxembourg, Germany and Ireland, whereas the lowest is found in Portugal. The highest wife's net income is found in Belgium, Denmark and Germany. The greatest differences between spouses are found in Luxembourg, Ireland and the Netherlands, whereas the smallest differences are found in Denmark and Portugal.

Figure II. 6. Wage rate of husbands and wives



Non-labour income is instrumented with the variable lagged one period. It includes, for each spouse, annual total net earnings from capital income and property, private transfers and social programs. The greatest husband's non-labour income is found in Luxembourg, while it is small in Denmark, Ireland, Portugal and Spain. The greatest wife's non-labour income is found in Belgium, Denmark and Finland. The husband's non-labour income is greater than the wife's in France, Greece, Italy, Luxembourg, the Netherlands, Portugal and Spain. Non-labour income is greater for wives in Austria, Belgium, Denmark, Finland, Germany, Ireland and the United Kingdom. Unsurprisingly, the wages or labour incomes of wives are nowhere greater than those of the husband.

Figure II. 7. Non-labour income of husbands and wives



II. 4. RESULTS

II. 4. 1. Child-Care

We estimate jointly the time husbands and wives spend looking after children in a seemingly unrelated regression equation system (SURE).

The higher the husbands wage, the fewer he devotes to caring for the children in Belgium, France, Ireland and Spain. In the latter, but also in Austria, Denmark, Finland, the Netherlands and Spain, the higher the wife's wage, the more hours their husbands spend looking after the children. This behaviour supports the theories of roles division. When there is specialization, and a better performance by the husband in the labour market, the less he devotes to household production; when the wife performs well in the labour market (the less specialized are the spouses) the more time husbands spend at home looking after the children. An example of non-traditional roles would be German and Italian fathers, who spend more time at home as their salary increases.

Husbands in Austria, Belgium, Denmark, Finland, Greece and Luxembourg present an inverted U-Shape behaviour in age. As they grow older, they spend more hours looking after the children, up to a threshold where they spend less time because the children are no longer children - they themselves are older and need less care. The opposite occurs in France, Italy, and Portugal where husbands, the older they get, continue to spend more hours in caring for children. The older the couple, the fewer hours the husbands spend with the children, in Luxembourg, whereas the opposite occurs in the Netherlands.

Regarding families with at least one child younger than 12 at home, husbands time in household production increases in Belgium. The more children under 16 living in the household, the more the hours spent by Danish, Finish, Greek, Italian, Dutch and Spanish husbands.

The higher the wife's wage, the less specialized is the household and the fewer hours she devotes to looking after the children in Austria, Denmark, Finland, France, Greece, Ireland, Italy, the Netherlands, Portugal and Spain.

The higher the husband's wage, the more hours the wife spends in household production in Austria, Germany and the Netherlands.

In France, Greece, the Netherlands, Portugal and Spain, wives present a U-shaped age behaviour: as they become older, they spend less time on caring for the children, until they reach an age when they spend more time on caring for the children.

Having at least one child younger than 12 at home increases the time the woman spends at home, looking after children, in Austria, Belgium and Ireland. The number of children affects wives more than husbands. The more children under 16 in the household, the more hours the wife spends in Austria, Denmark, Finland, France, Greece, Ireland, Italy, the Netherlands, Portugal and Spain.

Table II. 4a. Child-care husband

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	1.882484	-20.30047***	1.023894	1.287905	-4.613968*	5.756462**	6.338945	-7.947446*	5.58561***	-.6610075	-.2897806	-3.32934	-6.367309**	2.638103
	(2.591848)	(4.468237)	(4.677773)	(1.750241)	(2.416334)	(2.788409)	(4.843528)	(4.076324)	(1.937142)	(2.04621)	(.6204807)	(2.312534)	(3.112455)	(3.607659)
ExogWageWife	.9329646***	.3086377	1.778684*	1.023962*	.227525	.3559349	1.036958	.3340001	.3875911	-1.607022	.7240742***	-1.111738*	.9375308*	-1.63187
	(.3613527)	(3.486639)	(1.061806)	(.5356302)	(.4230171)	(.8369014)	(.7423401)	(.3444747)	(.2584057)	(1.220728)	(.1864923)	(.5754292)	(.5034069)	(2.315161)
AgeHusband	1.976205*	4.107504	4.306861**	3.118694*	-2.293025	-11.4456*	6.559516**	-2.066509	-1.363398*	33.838***	-.8162085	-1.350308	-1.915645	-1.691134
	(1.044329)	(2.925057)	(1.734045)	(1.71785)	(1.655662)	(6.003174)	(2.846894)	(6.164389)	(.7077746)	(6.640515)	(.652687)	(.8349459)	(1.714346)	(13.68985)
AgeHusband^2/100	-3.023009**	-6.219426*	-4.446051**	-3.795314**	2.87721*	10.22081	-4.845411**	-4.115298*	1.522198*	-23.27285***	-.4500836	2.390099**	1.436271	12.62215
	(1.350822)	(3.671994)	(1.822275)	(1.740253)	(1.500357)	(7.630296)	(2.336781)	(2.328416)	(.785472)	(8.718973)	(.6186333)	(1.15625)	(2.149412)	(17.73918)
AgeAverage	-.040419	.3031027	.0117712	-1.383354	.0234452			4.87784	.0178437	-18.12604***	.9045927**	-.0572095	.1143373	5.83e-13
	(.1428908)	(.3047481)	(.6751203)	(.8936828)	(1.199197)			(5.811722)	(.1974727)	(1.246525)	(.3763794)	(.1393596)	(.1775835)	(8.39e-08)
Child<12	.2868348	6.211173***	3.345453	-.5667692	3.574957	9.423628	-1.262581	1.886854	.7680764	-15.53584***	-.1840718	-.7489615	.1287496	-17.87963
	(1.026488)	(1.78812)	(2.541021)	(1.766982)	(3.026988)	(6.852318)	(3.794713)	(2.399247)	(.7203766)	(3.879201)	(.4984664)	(1.032308)	(2.150848)	(12.23115)
Children<16	.698118	-.7566673	1.636846*	2.990576***	1.285182	-4.990763	5.350497***	.1189258	1.090987**	-4.232279**	1.260159***	-.0879281	3.489163***	-15.2032*
	(.7295)	(2.305561)	(.9668833)	(1.007373)	(.9276038)	(3.045485)	(1.879191)	(.9551261)	(.497337)	(2.032318)	(.2952234)	(1.318853)	(1.09629)	(8.179364)
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

Table II. 4b. Child-care wife

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	7.824627*	-24.3398***	-1.287603	-4.201901*	-4.732152	7.841376*	7.873509	-2.003704	1.616286	3.081815	2.319709**	.1498421	-2.437807	-.6816168
	(4.054548)	(5.188185)	(5.414824)	(2.400984)	(3.15376)	(4.344085)	(6.087157)	(4.450186)	(2.977959)	(3.631258)	(1.099177)	(2.587358)	(3.830488)	(7.728677)
ExogWageWife	-3.150613***	-5.8578	-6.480343***	-7.104387***	-3.655619***	-.438286	-4.972587***	-2.117178***	-1.035713**	6.17176*	-1.978539***	-3.44442***	-2.706933***	1.95091
	(.6883598)	(3.720326)	(1.113645)	(.7083356)	(.571758)	(1.452144)	(1.28312)	(.6142827)	(.416879)	(3.571706)	(.3773661)	(.7671969)	(.7735429)	(2.064435)
AgeWife	-2.550588	-.655469	2.951036	-5.122005*	-9.103248***	10.51235	-8.661525**	2.315697	-2.643998***	23.07031*	-4.34927***	-3.409962**	-7.219152***	.2306178
	(1.700661)	(3.588905)	(1.920395)	(2.621234)	(2.295656)	(7.658498)	(3.60032)	(5.235836)	(.9537266)	(12.77617)	(1.117135)	(1.418393)	(2.250101)	(17.36033)
AgeWife^2/100	.5687643	-1.004594	-5.386193**	4.560354	10.93562***	-19.2066*	11.85011**	6.266332*	1.774264	-36.49658**	2.295615*	3.508345*	7.615431**	17.57844
	(2.334041)	(4.77447)	(2.376941)	(2.845101)	(2.416057)	(10.40027)	(5.041593)	(3.484709)	(1.185961)	(18.21887)	(1.203601)	(2.001328)	(3.054261)	(23.35797)
AgeAverage	.1322698	.2297896	.0236542	-3.816364	-.4419245			-6.934184	.1963573		.0402079	-.0208006	.2149751	3.56e-13
	(.104171)	(.406211)	(.7261324)	(1.342068)	(1.432176)			(4.734802)	(.2025544)		(.5578295)	(.1446552)	(.2036002)	(5.61e-08)
Child<12	4.052054**	6.364667***	.9891552	-4.299248	-1.882389	2.225613	-1.899602	7.311246**	.9580127	-.179733	.0964552	-.9548954	3.138547	-2.71287
	(1.886024)	(2.024758)	(3.041747)	(2.766191)	(4.016073)	(6.669747)	(4.521281)	(3.683757)	(1.128548)	(4.817072)	(.9384958)	(1.760242)	(3.11568)	(11.99584)
Children<16	4.510367***	3.360548	5.814682***	9.995055***	12.85807***	-1.970515	12.65009***	7.25483***	3.729233***	-3.227998	5.495069***	5.508102***	4.128143***	3.299645
	(1.527888)	(2.859274)	(1.108465)	(1.343888)	(1.305153)	(5.417197)	(2.482938)	(1.39348)	(.7322322)	(7.111316)	(.5702536)	(1.835604)	(1.518747)	(8.330814)
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significanceat the 1% level.

II. 4. 2. a Private Consumption of Husbands and Wives

Labour supply and consumption of husbands and wives is jointly estimated under a seemingly unrelated regression equation system, differencing out individual fixed effects. We take into account the possible correlation between the error terms in the husband's and the wife's labour supply and consumption equations, and report robust standard errors.

The husband's demand for a private good in the economy depends on the husband's wage in Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Portugal, Spain and the United Kingdom, in a positive way, and on the husband's non-labour income in Germany and Luxembourg. A higher wife's wage increases the private consumption of husbands in Luxembourg, but decreases it in Portugal. We are able to observe interactions between the wage and non-wage income of one household member, for instance the wife's non-labour income, and the consumption decision of the other, in Spain and the United Kingdom, through the sharing rule. Husbands present an inverted U-Shape form regarding private consumption in Denmark, Finland, Italy and Portugal. The older the husband is, the greater his demands, up to a threshold where his demand for a private good decreases. On average, older couples spend fewer resources, in Denmark, for instance, because of being retired, while the contrary occurs in the Netherlands.

Changes in wages, non-labour incomes or prices may not only affect household consumption and labour supply via the usual income effect, but also by a shift in bargaining power from one individual to the other. This has consequences for observable household consumption and labour supply. The source of the non-labour income may be important for the household allocation, and thus for the rejection of the income pooling hypothesis.

If there is at least one child under 12 living in the household, the husband consumes more in Finland and Germany and less in Portugal. The more children under 16 in the household, the more the husband consumes in Austria, France, the Netherlands, and the less he consumes in Luxembourg. Household production affects the wife's demand for a private good, in a positive way, in Luxembourg, Spain and the United Kingdom.

The wife's wage has a positive effect in consumption of a private good in Austria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and the United Kingdom**.** The effect of Browning *et al.*, 1994 (the wife's wage has a positive effect on her share of the household's private expenditures, and a negative effect on the husband's consumption) is found in Portugal. In Luxembourg, it depends positively on the husband's wage rate. The private consumption of the wife is much more affected than that of the husband by non-labour incomes, that is, final outcomes depend on the income each person brings into the household. The wife's private consumption is affected by her husband's non-labour income, positively in Belgium and negatively in Finland and Ireland. A higher non-labour income corresponds to the wife's lesser demand for a private consumption good in Denmark, Ireland and Italy, and her greater demand in Finland.

Having at least one child under 12 in the household increases the wife's consumption in Finland, Luxembourg and Portugal but decreases it in Germany. The more children under 16 in the household, the less the wife consumes in Finland, France, the Netherlands and the United Kingdom, and the more she consumes in Belgium, Greece and Portugal.

Table II. 5a. Husband's consumption of private goods

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	.3016158	.2400907	.4031268***	.2117684***	.152887**	1.6239	.4433609*	.0995095	.399554***	1.036842*	.0051984	.1474782**	.2580057*	0.4053
	(.1975021)	(.223492)	(.1360518)	(.0733788)	(.0749236)	[0.2025]***	(.2386518)	(.3852838)	(.114573)	(.6027918)	(.0626631)	(.0746222)	(.1332338)	[0.1491]***
ExogWageWife	-.0150708	-.0693038	.0212422	-.0133972	-.0168344	-0.0429	-.0726413	.0132041	.0002604	.3777401***	.0229995	-.0593401*	-.0239811	0.0289
	(.020919)	(.1098659)	(.022567)	(.0194903)	(.0115145)	[0.0378]	(.0575241)	(.0384133)	(.0129781)	(.1361173)	(.0219938)	(.0306266)	(.0157876)	[0.0679]
Non-LabourHusband	-.0671277	-.0383352	.0646865	.1345444	-.0608657	0.5125	.2229549	1.058339	-.1882262	.3589291*	-.1263782	-.0123573	-.1291078	0.2195
	(.0738637)	(.1078628)	(.0704834)	(.2820075)	(.1093137)	[0.2764]*	(.2794809)	(.6915966)	(.1240051)	(.1924301)	(.0926451)	(.2001572)	(.1627738)	[0.5050]
Non-LabourWife	.0261116	.1055801	.0660206	.0581685	-.053441	-0.1654	.1810421	-.3499597	-.0246726	.0121361	-.0306187	-.1420136	-.210621**	-1.1141
	(.0347133)	(.0709941)	(.0533254)	(.0663347)	(.0373214)	[0.3175]	(.2901856)	(.2946323)	(.0597304)	(.196603)	(.1034661)	(.1305214)	(.0892353)	[0.3449]***
AgeHusband	.0695814	.1968578	.1743152***	.3391952***	.0976523	0.0657		.1471341	.1424405***	1.15969	.0566522	.2088532***	.0571018	0.0128
	(.0595437)	(.1755351)	(.0420055)	(.1067069)	(.0652775)	[0.0625]		(.1503615)	(.0438236)	(.7570171)	(.0670835)	(.0690234)	(.0630943)	[0.1455]
AgeHusband^2/100	.0339793	-.1123002	-.0933905*	-.245388**	.0124102	0.0517	.2576709***	-.1785669	-.0870688*	-1.271661	-.0789912	-.1719119*	.0326408	-0.0285
	(.0795473)	(.2013282)	(.0503047)	(.1027036)	(.0643015)	[0.0811]	(.0643076)	(.1750074)	(.0498317)	(1.027862)	(.0695563)	(.089895)	(.0879445)	[0.1536]
AgeAverage	.0010016	-.0051976	-.0183359**	.0101939	.0280139	-0.0633		.1057799	-.0015984	.0259764	.0884579**	-.0050783	-.0031475	0.0446
	(.003145)	(.0124809)	(.0085911)	(.0517801)	(.042355)	[0.0568]		(.1397542)	(.0040897)	(.1096656)	(.0386298)	(.0036788)	(.0030693)	[0.0539]
Child<12	-.0323598	.0129034	-.0122166	.2919201**	.131712	0.3864	1.420835	-.1515661	-.0707489	.2051699	.1134979	-.2186371**	.1325832	0.3077
	(.0632109)	(.0807898)	(.0460478)	(.141487)	(.0966378)	[0.1620]**	(.8976417)	(.3998598)	(.0535329)	(.8508968)	(.0938602)	(.1117804)	(.0933736)	[0.2409]
Children<16	.1857535**	-.0407939	.0376627	-.0494023	.0959371***	0.0360	-.2965944	.170485	.0398809	-.752437**	.0987201**	.0879502	-.0048495	-0.0052
	(.0767678)	(.0924712)	(.0282686)	(.0473795)	(.0345122)	[0.0668]	(.3023222)	(.1248868)	(.0264776)	(.3009043)	(.0501316)	(.0933724)	(.0395951)	[0.1698]
HouseholdProduction	-.0013691	-.0011875	.0001326	-.0006176	-.0009278	-0.0063	.0025486	-.0006128	.0017247	.0007564	.0016223	.0004469	.0011727	-0.0044
	(.001556)	(.0021133)	(.00074)	(.001309)	(.0007469)	[0.0032]**	(.0033145)	(.0043375)	(.0011894)	(.0092105)	(.0026204)	(.0016293)	(.000884)	[0.0067]
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

Table II. 5b. Wife's consumption of private goods

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	-.0786929	-.145339	.0189602	-.1323966	-.081555	0.1153	-.0579453	.0203528	.0734978	.6867122*	.0229927	.065632	.0262356	0.1044
	(.1045491)	(.1373099)	(.0861566)	(.0872128)	(.0756517)	[0.1006]	(.2351159)	(.083825)	(.0642507)	(.394556)	(.0359331)	(.0454878)	(.0501989)	[0.1657]
ExogWageWife	.1027358***	.051709	.1405643***	.146901***	.0836944***	0.2390	.1495241**	.0737983***	.049142***	.0638688	.0657335***	.0745993***	.0247475*	0.2258
	(.0193895)	(.0742543)	(.0193026)	(.0205211)	(.0163897)	[0.0289]***	(.0604639)	(.0131638)	(.009996)	(.0971944)	(.0139041)	(.0147025)	(.0143048)	[0.0649]***
Non-LabourHusband	.0248848	.1866962**	.0096996	-.1037193***	-.0366587	0.0566	-.4977865	-.2434538***	.028142	-.1319434	.0166978	.0464399	-.0020518	1.4423
	(.0397539)	(.0776663)	(.0394901)	(.0395754)	(.0685266)	[0.1880]	(.4499896)	(.0909694)	(.0342208)	(.1752985)	(.0426834)	(.0826301)	(.0213909)	[0.9434]
Non-LabourWife	.0114159	-.2867887	-.0897083**	.6723253***	-.098817	0.2491	-.2922691	-.150719*	-.1424035*	.1177144	.0314196	-.0383497	.0266733	0.1887
	(.0402146)	(.1995067)	(.0355102)	(.1941652)	(.0744584)	[0.1693]	(.2992292)	(.0912082)	(.0820984)	(.132624)	(.1001061)	(.1023806)	(.0596013)	[0.3601]
AgeWife	-.0205745	-.0934205	.1169053***	.0212108	-.0482512	0.1385	.3567414	.0611172	.0223937	-.3944948	.140973**	.0426506	.0429329	0.0066
	(.0432438)	(.073881)	(.0318306)	(.0739954)	(.0585142)	[0.0492]***	(.2626166)	(.0610352)	(.025311)	(.3757679)	(.0555422)	(.0293442)	(.0414101)	[0.1177]
AgeWife^2/100	.0902594	.2120739**	-.0362082	.100084	.1059701	-0.1142	-.557407	.0586697	.016863	.2055825	-.1155693*	.0109354	.003422	-0.0376
	(.0590743)	(.1007879)	(.0394793)	(.083882)	(.0724917)	[0.0628]*	(.3934685)	(.0686444)	(.0334211)	(.5139742)	(.0609981)	(.0466782)	(.0587793)	[0.1570]
AgeAverage	-.0000447	.0065808	-.0133424	.0554315	-.000501	-0.0520		-.0541743	-.0015027		-.001848	.0035465	.0044428	0.0768
	(.0028066)	(.0102196)	(.0081534)	(.035567)	(.0210164)	[0.0187]***		(.0599067)	(.0031738)		(.0268129)	(.0049572)	(.0043412)	[0.0361]**
Child<12	.0591228	.0529542	-.0102531	.2501891***	.0097586	-0.2054	-2.342517	-.0763712	-.0171502	1.592814*	-.0460666	.0890202**	-.0195001	0.3667
	(.0486896)	(.0449741)	(.0386112)	(.0802599)	(.0836742)	[0.0984]**	(1.449662)	(.0597376)	(.0229565)	(.84238)	(.0343421)	(.0441518)	(.0396707)	[0.3006]
Children<16	-.0473596	.1008456*	.003122	-.1351268***	-.1144526***	-0.0096	.7532978*	-.0436904	-.0209515	.1183215	-.0566269***	.0798836***	-.015003	-0.2658
	(.0323107)	(.0585463)	(.0220759)	(.0455308)	(.0322009)	[0.0361]	(.4545445)	(.0304603)	(.0139529)	(.1003999)	(.01842)	(.0300616)	(.0190469)	[0.1200]**
HouseholdProduction	.0009475	-.0010212	.0000747	.0000346	.0007091	-0.0004	.0031056	-.0011648	.0000389	.01283**	.0001124	.0010168	.0009367*	0.0113
	(.0013254)	(.0012193)	(.0004553)	(.001418)	(.000689)	[0.0024]	(.0033886)	(.0009275)	(.0005841)	(.0055628)	(.0009095)	(.0009792)	(.0004801)	[0.0044]**
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

II. 4. 2. b Labour Supply of Husbands and Wives

The wife's labour supply depends much more on the wage rates for women than does that of the husband. We select households where the husbands works, so their decision to working more or fewer hours does not depend so much on their salary, since women work more hours in all countries, save in Luxembourg, as their wage rate increases. Husband's work more hours when their salary increases only in Austria and Ireland, while in the Netherlands and Spain they work fewer hours as their salary increases. The characteristics of the partner only affect the labour supply via the sharing rule, lets say, via the price of the household good.

Wives supply fewer hours in the labour market the higher is their husband's wage, in Finland, Portugal and the United Kingdom specializing in the household, whereas husbands increase their hours worked the higher the wife's wage, in Austria, Germany and the United Kingdom.

Non-labour incomes and extra-environmental parameters affect labour demands only through their effect on the sharing rule. The higher the husband's non-labour income in Austria, Denmark, the Netherlands, Spain, and the higher the wife's non-labour income in Denmark, Italy and the United Kingdom, the fewer hours the husbands supply in the labour market. The effect is the same for wives: the higher the husband's non-labour income in Finland, Ireland, and wives' non-labour income in Denmark, Greece, Ireland, Luxembourg and the Netherlands, the fewer hours the wife works in the labour market.

Husbands show an inverted U-Shape behaviour in Denmark, the Netherlands and Spain, where they work more hours up to a certain age, where their labour supply then begins to decrease.

The older the couple, the more hours both husbands and wives supply in France, whereas in Ireland wives work more and husbands less as the couple grows older.

The number of hours women supply in the labour market depends (much more than husbands) strongly on the number of children under 16 in the household. The more children, the fewer hours worked in the labour market in Belgium, Finland, France, Germany, Greece, Ireland, the Netherlands and Spain. When there is at least one child under 12 in the household, husbands increase their supply of labour in Germany and the UK. In Austria, the more children there are under 16, the more husbands increase their

supply of labour. Having at least one child under 12 in the household reduces the wife's labour supply in Ireland, Luxembourg, the Netherlands and Spain, in such a way that younger children significantly reduce the labour supply of women – and leisure time for men.

The effect of a household-produced good (educated children, healthy children) is that the husband reduces his supply of labour in the labour market in Austria, Denmark and Finland. The effect is the same on the wife's labour supply in Greece, Luxembourg, Portugal and Spain, while it is to the contrary in Belgium and Germany.

Table II. 6a. Husband's labour supply

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	3.539572*	-1.469468	.2212585	-.4122143	-.4100951	.01642	-2.70565	5.607808***	1.037044	-1.038216	-.9144556**	-1.763821	-3.994557**	.1952899
	(1.843341)	(1.428901)	(1.785258)	(1.111067)	(1.263144)	(1.48618)	(3.094406)	(1.887685)	(1.424143)	(.93466)	(.441612)	(1.244984)	(1.742731)	(1.301802)
ExogWageWife	.7354378***	.3869286	.3483824	-.105796	.0649838	.2981605*	1.31488	.1958543	-.0013127	.4737979	-.2074708*	.1587757	.2184646	2.531244***
	(.2713498)	(.7320126)	(.3215773)	(.2796602)	(.1619008)	(.1768439)	(.8150277)	(.2168646)	(.1562491)	(.2905062)	(.1197251)	(.3112485)	(.301589)	(.5452083)
Non-LabourHusband	-.7911333***	.3554079	-4.895809**	-.3234832	-.2113094	.7448182	.5052984	-1.033074	-.5643159	.3901613	-2.205183**	1.832881	-1.10901*	-.1059862
	(.2444322)	(.4647901)	(1.964753)	(.2359319)	(.5657052)	(.8719853)	(1.206699)	(1.194009)	(.4327331)	(.4873866)	(.8915428)	(1.793686)	(.648743)	(2.425884)
Non-LabourWife	.501023	.001483	-.7869594*	.2701027	.3446507	.0393396	-4.179815	.3250501	-1.021389**	-.1386834	.1610843	2.275832	-.3796051	-6.72933**
	(.3234567)	(.1988206)	(.4785105)	(.4545609)	(.5591252)	(1.637674)	(3.255605)	(1.657644)	(.4869272)	(.6280302)	(.6403604)	(2.641196)	(1.214776)	(2.760124)
AgeHusband	1.284576	.464603	1.139787**	1.504009	-.2727797	-2.832065		2.284846	.0241399	2.165765	.876082**	-1.447523	1.702027**	-1.626299
	(1.153629)	(.8390819)	(.545227)	(1.21845)	(.5221626)	(2.670802)		(1.509509)	(.4121569)	(2.367711)	(.3743538)	(1.167789)	(.8263928)	(2.828583)
AgeHusband^2/100	-2.183719	-.3741221	-1.651779***	-2.940751**	-.3101464	3.338359	-1.329719***	-.0024456	-.1763125	-2.820382	-.9610526**	1.43156	-2.268305**	2.079573
	(1.568719)	(1.059329)	(.6388539)	(1.299307)	(.6525493)	(3.297912)	(.4294673)	(1.273676)	(.4773888)	(2.991864)	(.375979)	(1.630207)	(1.067258)	(3.770019)
AgeAverage	.0422144	-.0633381	-.0349222	.5471177	.2961143**			-2.395575*	.055023	-.0122262	-.2044205	.1483411	-.0539038	.0130747
	(.1240523)	(.101601)	(.1458746)	(.5620545)	(.1300377)			(1.374971)	(.0830249)	(.5671103)	(.196714)	(.1764572)	(.0832311)	(.0696496)
Child<12	.5685447	-.0782417	-1.297952	-1.673203	-.4183346	2.484566*	-1.267322	-2.077004	-.5467144	1.024673	.4814693	.5296515	.5499829	4.355246*
	(.8707911)	(.5192097)	(.8320921)	(1.558395)	(.6153107)	(1.284195)	(2.726509)	(1.335691)	(.4707154)	(2.36111)	(.3912377)	(1.102089)	(.9653126)	(2.298534)
Children<16	1.134566*	-1.010468	.4921559	.2716117	.1255516	.9309876	1.339197	-.276737	-.0802778	.0265075	.0288816	.8691955	-.0805359	.6647443
	(.6789034)	(.6635792)	(.3992044)	(.5797649)	(.3690074)	(.8148275)	(2.110293)	(.5334857)	(.2696719)	(1.006128)	(.1971936)	(.7903111)	(.5649836)	(2.248537)
HouseholdProduction	-.0439294*	-.0102344	-.0255765***	-.0373752**	.000961	.0150457	.0212199	-.0231374	-.0068579	-.0114285	-.0128127	-.0288945	-.0075269	-.0092239
	(.0244644)	(.0096675)	(.0084844)	(.0175243)	(.0091789)	(.02071)	(.04729)	(.0189908)	(.0097577)	(.0302105)	(.0104898)	(.018263)	(.0144744)	(.0265253)
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

Table II. 6b. Wife's labour supply

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
ExogWageHusband	2.544044	.6820751	-1.70421	-2.485926*	-2.772639	-.6557264	-.0021881	.1288228	-1.67577	.0151676	-.7178645	-3.172607**	-.7300323	-6.320235*
	(2.594765)	(1.705795)	(1.922669)	(1.311164)	(1.988505)	(2.118281)	(3.505861)	(2.038789)	(2.079663)	(1.820672)	(.4946121)	(1.426735)	(1.572595)	(3.244319)
ExogWageWife	8.018037***	8.249716***	18.64543***	14.16161***	7.331559***	5.545325***	9.238028***	5.023113***	5.920816***	1.276153	3.944724***	10.77303***	7.610893***	3.877776***
	(.4952699)	(2.182031)	(.7828135)	(.585764)	(.4292095)	(.6022207)	(.8323342)	(.3306074)	(.4209151)	(2.323907)	(.3462725)	(.7820808)	(.4458059)	(.9734316)
Non-LabourHusband	-.4938537	.5016898	-.9763652	-.6377863***	1.329341	-.3160342	-.4904306	-5.0468***	-.1147431	-.3422629	-.1297751	-1.066266	.2116617	6.284638***
	(.3842383)	(.4856794)	(1.00987)	(.2089403)	(.8876422)	(1.758248)	(.7378186)	(1.629097)	(.3715044)	(2.312128)	(.6993637)	(1.934836)	(.3969091)	(2.384504)
Non-LabourWife	1.191235*	-.240003	-1.615286**	-.433235	.1771303	-.4626933	-10.55616*	-6.129196***	.6046845	-4.69559**	-5.070102***	-1.486164	-2.849632	-4.812234
	(.6997968)	(.5362107)	(.7328674)	(.3777732)	(.9333551)	(2.336983)	(5.81943)	(2.372189)	(1.068537)	(2.136768)	(1.252799)	(3.701265)	(1.839809)	(5.917333)
AgeWife	-1.948001	.0375429	-.6433632	.7087196	-.8709417	-.5555169	-1.400797	-2.341943*	-.1931186	2.671695	.7612968	-.7106423	-1.143367	-6.904894
	(1.74655)	(1.382675)	(.8342504)	(1.796478)	(1.072619)	(3.379309)	(2.351701)	(1.380159)	(.5529928)	(4.30864)	(.5157844)	(.9642219)	(.9601581)	(4.784425)
AgeWife^2/100	1.755323	1.592769	1.11727	-.2823705	-2.540942*	2.750761	1.148879	.3932181	.1027178	-7.655469	-.3738945	.6013768	1.364688	11.26875*
	(2.50282)	(1.860447)	(1.059794)	(1.589887)	(1.357787)	(4.628758)	(3.120496)	(1.785627)	(.7099388)	(5.919454)	(.5381869)	(1.395561)	(1.287459)	(6.404338)
AgeAverage	-.0066265	-.2501108**	-.081798	.450919	2.208474***			1.951447**	-.0131282		.210299	.0780492	-.0091439	-.0643785
	(.0922948)	(.1188127)	(.1944653)	(1.092778)	(.4126922)			(.9965488)	(.0512778)		(.2741655)	(.1082646)	(.080813)	(.0799294)
Child<12	-.646114	.7584046	2.543391**	-1.376179	1.555007	-2.563039	-.1456524	-4.108213***	-.3637469	-13.23645**	-.8084232*	-.5167885	-1.69428*	-3.156982
	(1.320634)	(.8162)	(1.054732)	(1.427741)	(1.812033)	(1.992184)	(2.061805)	(1.405631)	(.6271612)	(5.386527)	(.4421011)	(1.186469)	(.9034464)	(5.389788)
Children<16	-.7039683	-3.222196***	-.3306652	-2.60563***	-4.3629***	-4.82296***	-3.241925**	-2.379738***	-.176148	-1.49396	-1.528097***	.161788	-1.335216**	4.047059**
	(.9029994)	(.9970433)	(.4323618)	(.6491865)	(.7242523)	(1.818463)	(1.361349)	(.6279744)	(.3710469)	(2.124749)	(.2611998)	(1.216644)	(.6079785)	(1.801867)
HouseholdProduction	.0019104	.0418891***	.0004776	.0058479	-.0234385	.0915571***	-.0876435**	.0226336	-.0198172	-.2399654**	-.0048238	-.0665808*	-.0241443*	-.0290535
	(.0276529)	(.0147688)	(.0106691)	(.0201215)	(.0188651)	(.0340356)	(.0415184)	(.0225035)	(.0125705)	(.10688)	(.0131365)	(.0349293)	(.0141897)	(.0352941)
Number of Observations	1436	939	2287	1926	2337	476	326	1304	4445	144	5331	1178	1743	173

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

II. 4. 3. Sharing Rule

The sharing rule is determined in all countries, save Belgium, Germany, Luxembourg and the United Kingdom, by wife's wage rate (Fortin and Lacroix, 1997; Chiappori *et al*., 2002 found a negative effect of the wife's labour income on her share of household resources). The husband's non-labour income increases the wife's participation in Germany, and decreases it in Ireland. A higher wife's non-labour income reduces the distribution of resources within the household in favour of wives in Greece and increases it in Spain.

Being an older couple shifts the resources to the male's part in France, Germany and the United Kingdom.

Regarding children: having at least one child under age 12 increases the distribution of resources in favour of wives in Germany. The more children under age 16 in the household, the fewer resources are left in women's hands in France and the Netherlands.

Intra-family distribution of income is affected by the distribution factor in a negative way, shifting power to the husband in Finland, the Netherlands and Spain, whereas wives gain bargaining power in France and Greece.

Table II. 7. Sharing Rule

SharingRule	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
Wife's Wage	0.0323	0.0077	0.0205	0.0418	0.0277	0.0142	0.0580	0.0260	0.0214	-0.0161	0.0240	0.0326	0.0225	0.0130
	[0.0087]***	[0.0266]	[0.0080]**	[0.0078]***	[0.0053]***	[0.0147]	[0.0180]***	[0.0049]***	[0.0046]***	[0.0720]	[0.0042]***	[0.0110]***	[0.0089]**	[0.0456]
Non-LabourHusband	0.0094	0.0187	0.0042	-0.0024	0.0191	0.1314	-0.0495	-0.0544	0.0004	-0.0883	0.0113	-0.0129	0.0042	0.0891
	[0.0148]	[0.0114]	[0.0124]	[0.0041]	[0.0160]	[0.0468]***	[0.0678]	[0.0317]*	[0.0094]	[0.1145]	[0.0141]	[0.0358]	[0.0091]	[0.1119]
Non-LabourWife	0.0171	-0.0119	-0.0177	0.0409	-0.0324	-0.1168	-0.6342	0.0229	0.0238	0.6909	0.0578	-0.0481	0.1030	-0.0507
	[0.0158]	[0.0202]	[0.0394]	[0.0261]	[0.0235]	[0.0910]	[0.2805]**	[0.1256]	[0.0302]	[0.5561]	[0.0410]	[0.1061]	[0.0405]**	[0.1021]
AgeAverage	-0.0057	-0.0035	-0.0016	0.0056	-0.0103	-0.2856	0.0033	-0.0039	-0.0004	-0.1554	0.0075	-0.0022	0.0010	-0.3331
	[0.0040]	[0.0031]	[0.0019]	[0.0037]	[0.0020]***	[0.0134]***	[0.0066]	[0.0030]	[0.0014]	[0.0940]	[0.0012]***	[0.0068]	[0.0029]	[0.0267]***
Child<12	0.0209	-0.0002	0.0070	0.0316	0.0238	0.2011	-0.0680	-0.0244	-0.0003	0.0883	-0.0067	0.0131	-0.0057	0.0588
	[0.0191]	[0.0120]	[0.0122]	[0.0222]	[0.0202]	[0.0376]***	[0.1024]	[0.0179]	[0.0094]	[0.3115]	[0.0082]	[0.0270]	[0.0180]	[0.1226]
Children<16	-0.0178	0.0055	-0.0008	-0.0151	-0.0386	-0.0242	0.0408	-0.0018	-0.0078	0.0588	-0.0161	-0.0101	0.0065	0.0730
	[0.0142]	[0.0151]	[0.0082]	[0.0114]	[0.0093]***	[0.0490]	[0.0415]	[0.0102]	[0.0059]	[0.1342]	[0.0043]***	[0.0174]	[0.0095]	[0.0733]
DistribFactor	-0.1539	-0.0538	-0.0197	-0.1248	0.1590	0.0084	1.6064	-0.1120	-0.0915	-2.1144	-0.2197	0.0792	-0.1848	0.5081
	[0.1300]	[0.1196]	[0.1316]	[0.0745]*	[0.0855]*	[0.2576]	[0.9194]*	[0.2955]	[0.1224]	[1.7158]	[0.1145]*	[0.2287]	[0.1033]*	[0.3582]
Number of observations	1436	939	2287	1926	2337	1001	326	1304	4445	147	5331	1178	1743	388
Number of females	624	396	740	843	1023	673	147	536	1720	113	1757	540	878	298
R squared	0.05	0.02	0.01	0.04	0.14	0.71	0.18	0.08	0.02	0.35	0.05	0.01	0.04	0.83

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

II. 4. 4. Well-Being of Husbands and Wives

Household production time may generate satisfaction (psychic income) over and above that of paid work (Kerkhofs and Kooreman, 2003), which leads us to study the welfare of individuals within a household. We make welfare comparisons at the individual level, and not simply study the distribution of well-being across households. Collective indirect utilities allow us to make welfare comparisons in such a way that they yield actual changes in welfare via a modification in the household environment (Bonke and Browning, 2003).

Donni (2005) was aware that distortions regarding the intra-household distribution of resources, and erroneous welfare comparisons could be made when the production function is non-additive and that is not taken into account. He indicates that collective indirect utilities (Apps and Rees, 1996, 2002; Lundberg and Pollak, 1993; Bonke and Browning, 2003) and not the effect of wage on the wage-earner's own share of income should be used. The effect, on welfare, of non-labour income and distribution factors is correctly estimated using the simple model of labour supply, but the effect of wages is generally biased.

In equations (*3g*) and (*3h*), for the income and other variables, we distinguish both a transitory and a permanent effect. The permanent effect is $\gamma_{12} + \gamma_{13}$, and the transitory effect is γ_{12}.

The husband's satisfaction is much more influenced by the level effects of both labour and non-labour incomes, in and of themselves, than by transitory or shock effects. That is, we found a positive level effect of the husband's wage in Austria, France, Ireland, Italy, the Netherlands, Portugal and Spain. We found a positive non-labour income level effect in Austria, Finland, France, Greece, Italy and Portugal, and we found a U-Shaped effect of age, in Greece and the UK, on the husband's satisfaction.

The shock effect of the wife's wage is significant for the husband's satisfaction in Denmark, Greece and the Netherlands, whereas the wife's wage level affects the husband's satisfaction in Finland, Greece and Italy. The shock effect of the wife's non-labour income is significant for the husband's satisfaction in Greece, Portugal and the UK.

The wife's satisfaction is much more influenced by the shock effects of wages than by level effects. We find shock effects of the husband's wages in Austria, Belgium and Denmark, and shock effects of the wife's wages in Austria, Denmark, Finland, France, Ireland, Luxembourg, the Netherlands and Portugal. We observe level effects of the husband's wages in France, Italy, the Netherlands, Portugal and Spain, and of the wife's wages in Greece and Italy.

We found evidence of level effects of the non-labour income of husbands in France, Italy, Portugal and Spain, and of the non-labour income of wives in Belgium, Finland, Italy and the Netherlands. We found evidence of shock effects of the non-labour income of wives in Belgium, Greece and Portugal.

II. 5. CONCLUSIONS

The husband's hours spent looking after children are highly affected (very elastic) by his wages, while his hours of labour supply are very inelastic (they are assumed to work per se and the number of hours do not vary regarding wages). The higher the wage for husbands and wives, the less time they spend looking after their children (for husbands, the more specialized they are in the labour market, and for wives, the less specialized they are in the household).

In those households with a higher wife's wage, the more hours the husband spends looking after the children. The less specialized the spouses, the more new family roles are followed in Austria, Denmark, Finland, the Netherlands and Spain. A higher husband's wage, in Austria, Germany and the Netherlands, increases the number of hours the wife spends looking after the children; the more specialized the wife in the household, and the more specialised the husband in the labour market, the more likely it is that traditional roles are followed.

Husbands present an inverted U-shape behaviour while women present a U-Shaped behaviour in age regarding time spent in household production. The number of children affects the husband's hours of household production much more than his hours of labour supply, but this number has a much greater effect on the wife's hours spent looking after the children. This is borne out by Kooreman and Kapteyn, (1987), who found that the husband's allocation time is hardly affected by the presence of children.

The wife's private consumption depends as much on her own wage as on her husband's. The behaviour of the husband regarding consumption is of an inverted U-shape in age in Denmark, Finland, Italy and Portugal. Equilibrium distribution may depend not only on total family resources, but also on who controls these resources. This leads us to the rejection of the income pooling hypothesis.

We found different behaviour regarding the labour supply of husbands and wives. In all countries save Luxembourg, the wife's labour supply depends on the wage she earns – the higher her salary, the more she will work. However, the higher the husband's salary, the fewer hours she works. Husbands, in general, are presumed to work wherever their job – and their salary - requires them to be, so it would appear that they have an exogenous labour supply. The characteristics of the spouse affect the partner through the sharing rule, and through the price of the household good. Another

significant difference is the strong dependence of women's labour supply on not only having a child, but also on the number of children under 16, in such a way that the more children under 16 in a household, the fewer hours women decide to work in the labour market.

Having a higher non-labour income reduces the labour supply. When non-labour income is significant, we can conclude that the labour supply of both spouses decreases.

The wife's demand for a private good increases in Luxembourg, Spain and the United Kingdom, the greater is the household produced good. A household-produced good reduces the labour supply of husbands in Austria, Denmark and Finland, and of wives in Greece, Luxembourg, Portugal and Spain, while the contrary applies in Belgium and Germany.

The intra-household distribution of income is affected by the distribution factor, in such a way that the wife's bargaining power increases in France and Greece; this distribution factor shifts bargaining power to the husband in Finland, the Netherlands and Spain.

The husband's satisfaction is affected by the level effects of both labour and non-labour incomes of men, and the transitory or shock effects of women's wages and non-labour incomes. The wife's satisfaction is influenced by the shock effects of the wages of both husbands and wives, and the level effects of the non-labour incomes of both.

In the near future, changes in roles and consumption patterns should be studied through a collective model of time allocation.

Endnotes

Endnote 1. Household production is sometimes defined as the level of education and the health status of children. Unfortunately, we have no individual data for children under 16 that give their output in these crucial terms.

We assume constant returns of scale in the theoretical model to avoid problems in recovering the sharing rule. Although assuming constant returns to scale, our theoretical model will allow for different productivity parameters between partners within a household, but when estimating we assume equal productivities between spouses in our

empirical model. Some studies have found that men's productivity is on average higher in the traded-goods market, the difference being reflected in their higher wages (Rapoport and Sofer, 2004).

Endnote 2. The male is more productive than the female in performing household tasks, although females spend, on average, more time on household work males seem more efficient (Van Klaveren *et al*., 2006). Konrad and Lommerud, (1995), allowing for different productivity parameters regarding household production, find that the wife is more productive in performing household tasks. Kerkhofs and Kooreman, (2003) state that female education improves women's labour market opportunities at the same time as it reduces her advantage in home production. When productivity at home increases with age, it may be interpreted as a learning effect but also as a result of changes in life-style (Kerkhofs and Kooreman, 2003). Family size has more effect on the productivity of females than that of males.

Endnote 3. Distribution factors are those variables that may influence household decisions (household members bargaining power) but neither individual preferences nor the joint budget set through their effects on the intrahousehold allocation process - for instance, individual non-labour incomes (Vermeulen, 2002). The more attractive an individual's opportunities outside the family, the more strongly that individual's preferences will be reflected in the intra-family distribution of resources, even when the marriage does not actually dissolve (Haddad and Kanbur, 1992. Chiappori, Fortin and Lacroix, 2002 considered sex ratio and divorce laws as distribution factors). Rapoport, Sofer and Solaz, 2003 extended the Chiappori model with distribution factors, taking household production into account.

Groot and Van Den Brink, 1996 state that the situation of the marriage market has an impact on labour supply and on the sharing rule when household production is taken into account. We have not considered differences in age or education, since we are working with a panel structure. Those variables that are constant over time would be dropped from our estimation. If a cross section is studied, as in Aronsson *et al*., 2001, such variables as differences in age and differences in education can be considered as distribution factors within the household. (Crespo, 2005, also rejects the non-existence of distribution factors when considering education level differences between the spouses).

Endnote 4. Although with these models we avoid explicit reference to threat points, which is necessary in models where the equilibrium is given by the Nash solution, the way we define whether household produced goods are marketable or not, and the distribution factors affecting the sharing rule, lead us to consider the threat point as a cooperative or non-cooperative equilibrium within the household.

Endnote 5. When we allow for the non-participation decision of wives within the collective framework (Zamora, 2002), there exist corner solutions, and some problems (Donni, 2003) such as reservation wages[10] may not be unique, since the individual's non-labour income following intra-household transfers also depends on his/her wage.

Endnote 6. We select those couples in which husbands work in the labour market. When we examine labour market participation rates (*Table A. II. 1a*), most countries are around 75%, but the rates for women range from 42.62% in Spain to 72.72% in Denmark. In the table, we observe labour market participation rates (male and female) as well as labour market participation rates of married women and birth rates (*Table A. II. 1.b*) in EU 14 (Eurostat) in order to check (as del Bocca, 2002 states) that in Southern European countries, both low birth rates and lower labour market participation rates of married women are observed (also found in Mira and Ahn, 1999 for Southern European countries and for Ireland). This would mean that there are rigidities in those labour markets that discourage the participation of married women, at the same time as fertility increases the costs of having children (opportunity costs of the time spent on child care; market sector child care and consumption purchased as substitutes for domestic goods). An increase in wage rates, for instance, will decrease fertility rates but will increase female labour participation.

[10] Wage rates for which the individual is indifferent between working and not working. The reservation wage rather than the market wage is the one that affects the labour supply decision of the other household member.

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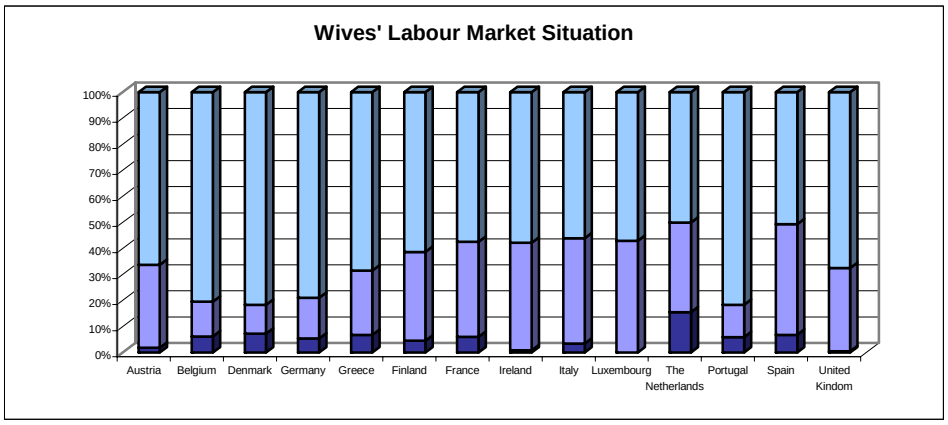
Table A. II. 1. a Labour force participation rates

	Male LFPR	Female LFPR	Married Female LFPR
Austria	76.44	55.15	51.89
Belgium	76.17	57.4	60.14
Denmark	82.96	72.72	78.44
France	74.91	58	57.94
Finland	75.49	69.22	77.43
Germany	79.74	60.15	56.68
Greece	77.61	46.13	43.88
the Netherlands	79.08	52.38	47.79
Ireland	79.77	45.04	38.85
Italy	75	45.21	41.75
Luxembourg	83.52	47.74	32.74
Spain	74.91	42.62	37.24
Portugal	80.09	57.36	59.71
United Kingdom	82.15	60.84	59.21

Source: ECHP

Figure A. II. 1 Labour market situation of wives



Source: our ECHP samples

Table A. II. 1. b Total fertility rate (number of children per woman)

	2001	2000	1999	1998	1997	1996	1995	1994
Belgium	1.64	1.66	1.61	1.59	1.61	1.59	1.55	1.56
Denmark	1.74	1.77	1.73	1.72	1.75	1.75	1.80	1.81
Germany	1.35	1.38	1.36	1.36	1.37	1.32	1.25	1.24
Greece	1.25	1.29	1.28	1.29	1.31	1.30	1.32	1.35
Spain	1.26	1.24	1.20	1.15	1.19	1.17	1.18	1.21
Ireland	1.94	1.90	1.91	1.95	1.94	1.88	1.84	1.85
Italy	1.25	1.24	1.22	1.19	1.22	1.20	1.18	1.21
Luxembourg	1.66	1.76	1.73	1.68	1.71	1.76	1.69	1.72
The Netherlands	1.71	1.72	1.65	1.63	1.56	1.53	1.53	1.57
Austria	1.33	1.36	1.34	1.37	1.39	1.45	1.42	1.47
Portugal	1.45	1.55	1.50	1.48	1.47	1.44	1.41	1.44
Finland	1.73	1.73	1.74	1.70	1.75	1.76	1.81	1.85
UK	1.63	1.64	1.68	1.71	1.72	1.72	1.71	1.74

Source: ECHP

Table A. II. 2 Mean and Std. Deviation (variables employed to instrument (to exogenize) wages)

Variables	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	United Kingdom
PrimaryEducHusband	0.1030	0.1935	0.1391	0.1608	0.3547	0.1546	0.1780	0.3341	0.4174	0.4016	0.5761	0.6632	0.4342	0.3080
	(0.3040)	(0.3952)	(0.3461)	(0.3675)	(0.4785)	(0.3617)	(0.3829)	(0.4718)	(0.4932)	(0.4912)	(0.4942)	(0.4728)	(0.4957)	(0.4622)
SecondaryEducHusband	0.7631	0.3844	0.4724	0.4452	0.3295	0.4699	0.3360	0.4242	0.4252	0.2972	0.2767	0.1908	0.2210	0.3973
	(0.4253)	(0.4867)	(0.4993)	(0.4971)	(0.4701)	(0.4993)	(0.4728)	(0.4943)	(0.4944)	(0.4579)	(0.4474)	(0.3931)	(0.4150)	(0.4899)
HigherEducHusband	0.1281	0.3792	0.3852	0.3924	0.2827	0.3746	0.4860	0.2382	0.1492	0.3012	0.1416	0.1375	0.3449	0.2946
	(0.3343)	(0.4854)	(0.4867)	(0.4884)	(0.4504)	(0.4842)	(0.5003)	(0.4261)	(0.3563)	(0.4597)	(0.3486)	(0.3445)	(0.4754)	(0.4564)
PrimaryEducWife	0.2028	0.1673	0.1337	0.1022	0.3218	0.2165	0.2060	0.2752	0.4061	0.4859	0.5953	0.6066	0.4515	0.3393
	(0.4022)	(0.3734)	(0.3404)	(0.3029)	(0.4673)	(0.4120)	(0.4048)	(0.4467)	(0.4911)	(0.5008)	(0.4909)	(0.4887)	(0.4977)	(0.4740)
SecondaryEducWife	0.6777	0.3459	0.4610	0.3761	0.3165	0.5799	0.3600	0.5067	0.4602	0.3574	0.2867	0.2000	0.2092	0.4174
	(0.4675)	(0.4759)	(0.4986)	(0.4845)	(0.4652)	(0.4938)	(0.4805)	(0.5001)	(0.4984)	(0.4802)	(0.4522)	(0.4001)	(0.4068)	(0.4937)
HigherEducWife	0.1126	0.4588	0.4012	0.5210	0.3315	0.2036	0.4340	0.2110	0.1246	0.1566	0.1131	0.1711	0.3393	0.2433
	(0.3162)	(0.4985)	(0.4902)	(0.4997)	(0.4708)	(0.4029)	(0.4961)	(0.4081)	(0.3303)	(0.3642)	(0.3168)	(0.3767)	(0.4736)	(0.4296)
SeniorityHusband 1	0.1206	0.0692	0.2441	0.1737	0.1403	0.1546	0.1040	0.1704	0.0822	0.0884	0.1233	0.1533	0.2004	0.1853
	(0.3257)	(0.2539)	(0.4296)	(0.3789)	(0.3474)	(0.3617)	(0.3056)	(0.3761)	(0.2747)	(0.2844)	(0.3288)	(0.3604)	(0.4003)	(0.3889)
SeniorityHusband 2	0.1329	0.1191	0.2290	0.1775	0.1504	0.1796	0.1120	0.1325	0.1010	0.1687	0.1471	0.1408	0.1261	0.1629
	(0.3395)	(0.3240)	(0.4203)	(0.3822)	(0.3575)	(0.3840)	(0.3157)	(0.3391)	(0.3013)	(0.3752)	(0.3542)	(0.3479)	(0.3320)	(0.3697)
SeniorityHusband 3	0.1729	0.1848	0.1936	0.2249	0.2364	0.1924	0.1540	0.1552	0.1580	0.2329	0.1962	0.2263	0.1787	0.2210
	(0.3783)	(0.3883)	(0.3952)	(0.4176)	(0.4250)	(0.3944)	(0.3613)	(0.3622)	(0.3647)	(0.4236)	(0.3972)	(0.4186)	(0.3832)	(0.4154)
SeniorityHusband 4	0.5736	0.6270	0.3333	0.4239	0.4729	0.4734	0.6300	0.5419	0.6588	0.5100	0.5334	0.4796	0.4949	0.4308
	(0.4947)	(0.4838)	(0.4715)	(0.4943)	(0.4993)	(0.4995)	(0.4833)	(0.4984)	(0.4741)	(0.5009)	(0.4989)	(0.4997)	(0.5001)	(0.4957)
ExperienceHusband	20.3453	18.3012	18.9947	18.6189	12.7917	20.5722	19.0860	21.8385	19.1714	19.6024	20.9690	17.7283	19.0956	19.7589
	(8.4281)	(7.9914)	(7.9632)	(8.1973)	(10.3654)	(7.4991)	(8.5358)	(8.2077)	(9.3661)	(7.1062)	(9.0610)	(9.0540)	(7.7032)	(7.9396)
ExperienceHusband^2	4.8492	3.9874	4.2419	4.1383	2.7103	4.7940	4.3699	5.4426	4.5525	4.3455	5.2179	3.9621	4.2396	4.5331
	(3.6654)	(3.2942)	(3.4721)	(3.5162)	(3.2503)	(3.4129)	(3.5659)	(3.8459)	(3.8473)	(2.8570)	(3.8152)	(4.2193)	(3.3478)	(3.1694)
FirmSizeHusband 1	0.0528	0.0306	0.0331	0.1224	0.0181	0.0206	0.1220	0.1369	0.0791	0.0000	0.0466	0.0954	0.1051	0.0513
	(0.2238)	(0.1724)	(0.1789)	(0.3278)	(0.1333)	(0.1422)	(0.3276)	(0.3439)	(0.2699)	(0.0000)	(0.2108)	(0.2939)	(0.3068)	(0.2209)
FirmSizeHusband 2	0.1318	0.0517	0.1137	0.1550	0.0338	0.0911	0.2060	0.1637	0.2079	0.0683	0.0343	0.1546	0.1342	0.0424

	(0.3384)	(0.2214)	(0.3175)	(0.3620)	(0.1808)	(0.2878)	(0.4048)	(0.3701)	(0.4059)	(0.2527)	(0.1821)	(0.3616)	(0.3409)	(0.2017)
FirmSizeHusband 3	0.1686	0.0727	0.1825	0.2016	0.0459	0.1117	0.2040	0.1873	0.1796	0.1606	0.1121	0.2309	0.2004	0.1116
	(0.3745)	(0.2597)	(0.3864)	(0.4013)	(0.2093)	(0.3151)	(0.4034)	(0.3903)	(0.3839)	(0.3679)	(0.3155)	(0.4216)	(0.4003)	(0.3152)
FirmSizeHusband 4	0.1660	0.0946	0.1220	0.1391	0.0352	0.1048	0.1240	0.1169	0.1134	0.1245	0.1082	0.1395	0.1287	0.0893
	(0.3721)	(0.2927)	(0.3274)	(0.3461)	(0.1842)	(0.3064)	(0.3299)	(0.3213)	(0.3171)	(0.3308)	(0.3106)	(0.3466)	(0.3349)	(0.2855)
FirmSizeHusband 5	0.0961	0.0578	0.0846	0.0971	0.0268	0.0576	0.0620	0.0803	0.0797	0.0924	0.0938	0.0947	0.0754	0.0513
	(0.2947)	(0.2335)	(0.2783)	(0.2962)	(0.1615)	(0.2330)	(0.2414)	(0.2718)	(0.2708)	(0.2901)	(0.2916)	(0.2929)	(0.2640)	(0.2209)
FirmSizeHusband 6	0.1932	0.1156	0.1749	0.1671	0.0579	0.1306	0.0520	0.1521	0.1135	0.1446	0.2146	0.1329	0.1173	0.1161
	(0.3949)	(0.3199)	(0.3799)	(0.3731)	(0.2337)	(0.3371)	(0.2222)	(0.3592)	(0.3172)	(0.3524)	(0.4106)	(0.3396)	(0.3218)	(0.3207)
FirmSizeHusband 7	0.1825	0.2110	0.1200	0.1068	0.0486	0.1821	0.0720	0.0651	0.0975	0.1446	0.2881	0.0855	0.1364	0.2902
	(0.3864)	(0.4082)	(0.3250)	(0.3090)	(0.2150)	(0.3861)	(0.2587)	(0.2468)	(0.2967)	(0.3524)	(0.4529)	(0.2798)	(0.3433)	(0.4544)
OccupHusband G1	0.0848	0.0464	0.0786	0.1430	0.0599	0.0842	0.1240	0.1369	0.0451	0.0924	0.1880	0.0822	0.0824	0.1406
	(0.2787)	(0.2105)	(0.2691)	(0.3501)	(0.2374)	(0.2778)	(0.3299)	(0.3439)	(0.2075)	(0.2901)	(0.3908)	(0.2748)	(0.2750)	(0.3480)
OccupHusband G2	0.0672	0.1287	0.2056	0.1853	0.1226	0.2216	0.2300	0.1525	0.0955	0.1888	0.1893	0.1092	0.1603	0.1652
	(0.2505)	(0.3350)	(0.4042)	(0.3886)	(0.3280)	(0.4155)	(0.4213)	(0.3596)	(0.2939)	(0.3921)	(0.3918)	(0.3120)	(0.3669)	(0.3718)
OccupHusband G3	0.1814	0.1270	0.1581	0.1158	0.1896	0.1503	0.0700	0.1057	0.1296	0.1205	0.1742	0.1039	0.1107	0.1071
	(0.3855)	(0.3331)	(0.36499	(0.3200)	(0.3920)	(0.3576)	(0.2554)	(0.3075)	(0.3359)	(0.3262)	(0.3793)	(0.3053)	(0.3138)	(0.3096)
OccupHusband G4	0.1009	0.1366	0.0455	0.0369	0.0780	0.0576	0.1080	0.0473	0.1674	0.0964	0.0697	0.0618	0.0702	0.0804
	(0.3012)	(0.3436)	(0.2084)	(0.1886)	(0.2683)	(0.2330)	(0.3107)	(0.2123)	(0.3733)	(0.2957)	(0.2546)	(0.2409)	(0.2556)	(0.2721)
OccupHusband G5	0.0934	0.0289	0.0578	0.0435	0.0486	0.0490	0.0280	0.0776	0.1022	0.0442	0.0471	0.0901	0.1077	0.0513
	(0.2910)	(0.1676)	(0.2335)	(0.2040)	(0.2150)	(0.2159)	(0.1651)	(0.2676)	(0.3030)	(0.2059)	(0.2119)	(0.2865)	(0.3101)	(0.2209)
OccupHusband G6	0.0939	0.0035	0.0298	0.1014	0.0348	0.0223	0.0120	0.1120	0.0382	0.0281	0.0123	0.0599	0.0379	0.0067
	(0.2918)	(0.0591)	(0.1699)	(0.3019)	(0.1834)	(0.1478)	(0.1090)	(0.3154)	(0.1917)	(0.1656)	(0.1101)	(0.2373)	(0.1909)	(0.0816)
OccupHusband G7	0.1958	0.1235	0.1518	0.1876	0.2338	0.2320	0.2320	0.1641	0.2021	0.2048	0.1461	0.2605	0.2199	0.2522
	(0.3970)	(0.3291)	(0.3589)	(0.3905)	(0.4233)	(0.4223)	(0.4225)	(0.3705)	(0.4016)	(0.4044)	(0.3533)	(0.4391)	(0.4142)	(0.4348)
OccupHusband G8	0.1195	0.0779	0.0946	0.1084	0.1504	0.1057	0.0860	0.1039	0.0969	0.1446	0.0765	0.1158	0.1081	0.1250
	(0.3245)	(0.2682)	(0.2927)	(0.3109)	(0.3575)	(0.3075)	(0.2806)	(0.3052)	(0.2959)	(0.3524)	(0.2658)	(0.3201)	(0.3105)	(0.3311)
OccupHusband G9	0.0534	0.0613	0.0645	0.0233	0.0375	0.0515	0.0320	0.0834	0.0767	0.0723	0.0339	0.0763	0.0824	0.0625
	(0.2248)	(0.2400)	(0.2457)	(0.1509)	(0.1900)	(0.2212)	(0.1762)	(0.2766)	(0.2662)	(0.2595)	(0.1810)	(0.2656)	(0.2750)	(0.2423)
PrivateSectorHusband	0.7289	0.4825	0.7242	0.7463	0.6477	0.6581	0.6020	0.7128	0.6469	0.7149	0.7497	0.7658	0.7224	0.6987
	(0.4446)	(0.4999)	(0.4470)	(0.4352)	(0.4778)	(0.4746)	(0.4900)	(0.4526)	(0.4780)	(0.4524)	(0.4332)	(0.4236)	(0.4479)	(0.4594)

PublicSectorHusband	0.2636	0.2513	0.2584	0.2467	0.2753	0.3204	0.3880	0.2823	0.3288	0.2811	0.2321	0.2224	0.2684	0.2522
	(0.4407)	(0.4340)	(0.4379)	(0.4312)	(0.4467)	(0.4668)	(0.4878)	(0.4502)	(0.4698)	(0.4505)	(0.4222)	(0.4160)	(0.4432)	(0.4348)
AgricultureSectorHusband	0.0961	0.0044	0.0441	0.0967	0.0244	0.0249	0.0080	0.1298	0.0537	0.0281	0.0251	0.0671	0.0493	0.0134
	(0.2947)	(0.0661)	(0.2054)	(0.2957)	(0.1545)	(0.1559)	(0.0892)	(0.3362)	(0.2254)	(0.1656)	(0.1563)	(0.2503)	(0.2165)	(0.1151)
IndustrySectorHusband	0.3725	0.2898	0.2798	0.2918	0.3868	0.4218	0.3000	0.3354	0.3160	0.3655	0.2787	0.3993	0.3441	0.4063
	(0.4836)	(0.4539)	(0.4490)	(0.4547)	(0.4871)	(0.4941)	(0.4587)	(0.4722)	(0.4649)	(0.4825)	(0.4484)	(0.4899)	(0.4752)	(0.4917)
ServiceSectorHusband	0.5293	0.4413	0.5165	0.3803	0.5486	0.5361	0.6780	0.5326	0.6050	0.6024	0.5779	0.5257	0.6040	0.5313
	(0.4993)	(0.4968)	(0.4998)	(0.4856)	(0.4977)	(0.4989)	(0.4677)	(0.4991)	(0.4889)	(0.4904)	(0.4939)	(0.4995)	(0.4891)	(0.4996)
SeniorityWife 1	0.1414	0.0946	0.2417	0.1624	0.1092	0.1469	0.1120	0.1454	0.0636	0.0964	0.0860	0.1559	0.1165	0.1629
	(0.3485)	(0.2927)	(0.4282)	(0.3689)	(0.3119)	(0.3542)	(0.3157)	(0.3526)	(0.2440)	(0.2957)	(0.2804)	(0.3629)	(0.3209)	(0.3697)
SeniorityWife 2	0.1147	0.1313	0.2070	0.1239	0.1155	0.1280	0.1000	0.1070	0.0662	0.1205	0.0916	0.1414	0.0706	0.1540
	(0.3188)	(0.3379)	(0.4052)	(0.3296)	(0.3197)	(0.3342)	(0.3003)	(0.3092)	(0.2487)	(0.3262)	(0.2885)	(0.3486)	(0.2562)	(0.3614)
SeniorityWife 3	0.1286	0.1926	0.1605	0.1706	0.1685	0.1186	0.1080	0.0990	0.1007	0.1124	0.1109	0.2112	0.1018	0.1607
	(0.3348)	(0.3945)	(0.3671)	(0.3762)	(0.3743)	(0.3234)	(0.3107)	(0.2988)	(0.3009)	(0.3166)	(0.3140)	(0.4083)	(0.3025)	(0.3677)
SeniorityWife 4	0.6153	0.5814	0.3908	0.5431	0.6068	0.6065	0.6800	0.6485	0.7695	0.6707	0.7115	0.4914	0.7110	0.5223
	(0.4867)	(0.4935)	(0.4880)	(0.4982)	(0.4885)	(0.4887)	(0.4669)	(0.4775)	(0.4212)	(0.4709)	(0.4531)	(0.5001)	(0.4534)	(0.5001)
ExperienceWife	16.4872	15.3713	15.9351	16.2440	10.1654	17.8024	12.7060	19.1575	12.6881	16.4337	13.2190	12.9388	14.3662	17.2388
	(8.3199)	(7.7668)	(7.3516)	(7.6162)	(9.1388)	(7.0567)	(8.5589)	(7.6361)	(10.1440)	(7.4874)	(10.9076)	(8.4729)	(8.4324)	(7.3839)
ExperienceWife^2	3.4101	2.9655	3.0796	3.2185	1.8683	3.6668	2.3455	4.2529	2.6387	3.2590	2.9370	2.3916	2.7747	3.5158
	(2.9315)	(2.8427)	(2.8668)	(2.8348)	(2.4532)	(2.7231)	(2.4149)	(3.0599)	(3.1534)	(2.4020)	(3.2872)	(3.1620)	(2.6918)	(2.6521)
FirmSizeWife 1	0.0470	0.0254	0.0171	0.0890	0.0107	0.0206	0.0300	0.0210	0.0272	0.0080	0.0261	0.0651	0.0430	0.0246
	(0.2116)	(0.1574)	(0.1295)	(0.2848)	(0.1030)	(0.1422)	(0.1708)	(0.1433)	(0.1628)	(0.0894)	(0.1594)	(0.2468)	(0.2029)	(0.1549)
FirmSizeWife 2	0.1547	0.0665	0.0548	0.1030	0.0305	0.0851	0.1080	0.0763	0.1062	0.0924	0.0231	0.1461	0.0654	0.0290
	(0.3618)	(0.2494)	(0.2277)	(0.3040)	(0.1719)	(0.2791)	(0.3107)	(0.2655)	(0.3081)	(0.2901)	(0.1502)	(0.3533)	(0.2473)	(0.1680)
FirmSizeWife 3	0.1601	0.0823	0.1508	0.1888	0.0335	0.0859	0.1300	0.1325	0.1096	0.1245	0.0624	0.1684	0.0952	0.0513
	(0.3668)	(0.2750)	(0.3579)	(0.3914)	(0.1799)	(0.2804)	(0.3366)	(0.3391)	(0.3124)	(0.3308)	(0.2418)	(0.3744)	(0.2936)	(0.2209)
FirmSizeWife 4	0.0945	0.0692	0.1174	0.1348	0.0301	0.0507	0.0920	0.0928	0.0684	0.0482	0.0496	0.1250	0.0665	0.0647
	(0.2925)	(0.2539)	(0.3219)	(0.3416)	(0.1710)	(0.2195)	(0.2893)	(0.2902)	(0.2525)	(0.2146)	(0.2171)	(0.3308)	(0.2493)	(0.2463)
FirmSizeWife 5	0.0368	0.0429	0.0705	0.0956	0.0204	0.0335	0.0580	0.0464	0.0510	0.0161	0.0369	0.0783	0.0489	0.0469
	(0.1884)	(0.2027)	(0.2561)	(0.2941)	(0.1415)	(0.1800)	(0.2340)	(0.2104)	(0.2201)	(0.1260)	(0.1886)	(0.2687)	(0.2157)	(0.2116)
FirmSizeWife 6	0.0736	0.1261	0.1003	0.1033	0.0328	0.0524	0.0360	0.0919	0.0600	0.0643	0.1062	0.1066	0.0555	0.0603

	(0.2613)	(0.3321)	(0.3005)	(0.3045)	(0.1782)	(0.2229)	(0.1865)	(0.2889)	(0.2374)	(0.2457)	(0.3081)	(0.3087)	(0.2290)	(0.2382)
FirmSizeWife 7	0.0790	0.0858	0.0996	0.0719	0.0228	0.0550	0.0400	0.0562	0.0471	0.0321	0.1260	0.0697	0.0676	0.1496
	(0.2698)	(0.2802)	(0.2996)	(0.2583)	(0.1492)	(0.2280)	(0.1962)	(0.2304)	(0.2119)	(0.1767)	(0.3319)	(0.2548)	(0.2512)	(0.3570)
OccupWife G1	0.0197	0.0123	0.0338	0.0493	0.0161	0.0163	0.0400	0.0384	0.0067	0.0241	0.0408	0.0243	0.0272	0.0580
	(0.1392)	(0.1101)	(0.1807)	(0.2166)	(0.1258)	(0.1268)	(0.1962)	(0.1921)	(0.0818)	(0.1537)	(0.1979)	(0.1542)	(0.1627)	(0.2341)
OccupWife G2	0.0496	0.1821	0.1301	0.1892	0.0623	0.1091	0.1940	0.1713	0.1024	0.1365	0.1054	0.1086	0.1618	0.1585
	(0.2172)	(0.3861)	(0.3364)	(0.3917)	(0.2417)	(0.3119)	(0.3958)	(0.3768)	(0.3032)	(0.3441)	(0.3071)	(0.3112)	(0.3683)	(0.3656)
OccupWife G3	0.1499	0.1025	0.2166	0.1453	0.1762	0.2156	0.0660	0.0669	0.0795	0.0723	0.1604	0.0967	0.0585	0.0469
	(0.3571)	(0.3034)	(0.4120)	(0.3525)	(0.3810)	(0.4114)	(0.2485)	(0.2499)	(0.2706)	(0.2595)	(0.3670)	(0.2957)	(0.2346)	(0.2116)
OccupWife G4	0.1457	0.1532	0.1401	0.1096	0.1942	0.1143	0.1560	0.1343	0.1744	0.1606	0.1185	0.1382	0.0757	0.1808
	(0.3529)	(0.3604)	(0.3471)	(0.3124)	(0.3957)	(0.3183)	(0.3632)	(0.3410)	(0.3795)	(0.3679)	(0.3232)	(0.3452)	(0.2646)	(0.3853)
OccupWife G5	0.1483	0.0902	0.1508	0.1239	0.1323	0.1254	0.0620	0.1088	0.0762	0.0763	0.1344	0.1434	0.0915	0.1629
	(0.3555)	(0.2866)	(0.3579)	(0.3296)	(0.3389)	80.3313)	(0.2414)	(0.3115)	(0.2654)	(0.2660)	(0.3411)	(0.3506)	(0.2884)	(0.3697)
OccupWife G6	0.0843	0.0026	0.0064	0.0668	0.0121	0.0163	0.0000	0.0067	0.0097	0.0000	0.0046	0.0553	0.0092	0.0000
	(0.2779)	(0.0512)	(0.0795)	(0.2498)	(0.1092)	(0.1268)	(0.0000)	(0.0815)	(0.0981)	(0.0000)	(0.0674)	(0.2286)	(0.0954)	(0.0000)
OccupWife G7	0.0149	0.0158	0.0097	0.0237	0.0047	0.0146	0.0360	0.0134	0.0373	0.0080	0.0060	0.0789	0.0184	0.0223
	(0.1214)	(0.1246)	(0.0980)	(0.1521)	(0.0683)	(0.1200)	(0.1865)	(0.1149)	(0.1894)	(0.0894)	(0.0772)	(0.2697)	(0.1344)	(0.1479)
OccupWife G8	0.0144	0.0149	0.0241	0.0128	0.0355	0.0120	0.0080	0.0321	0.0117	0.0161	0.0102	0.0454	0.0092	0.0379
	(0.1192)	(0.1212)	(0.1533)	(0.1125)	(0.1851)	(0.1091)	(0.0892)	(0.1763)	(0.1077)	(0.1260)	(0.1004)	(0.2082)	(0.0954)	(0.1913)
OccupWife G9	0.0747	0.0499	0.0465	0.0389	0.0345	0.0515	0.0200	0.0535	0.0493	0.1566	0.0604	0.1309	0.0746	0.0848
	(0.2630)	(0.2179)	(0.2105)	(0.1933)	(0.1825)	(0.2212)	(0.1401)	(0.2251)	(0.2166)	(0.3642)	(0.2383)	(0.3374)	(0.2628)	(0.2789)
PrivateSectorWife	0.4493	0.3678	0.3494	0.4207	0.4099	0.3325	0.2980	0.3533	0.2979	0.3695	0.3038	0.5467	0.3018	0.3839
	(0.4976)	(0.4824)	(0.4769)	(0.4938)	(0.4919)	(0.4713)	(0.4578)	(0.4781)	(0.4574)	(0.4836)	(0.4599)	(0.4980)	(0.4591)	(0.4869)
PublicSectorWife	0.1974	0.2102	0.4587	0.3683	0.2438	0.2457	0.2680	0.2212	0.2405	0.1807	0.1677	0.2618	0.1993	0.2143
	(0.3982)	(0.4076)	(0.4984)	(0.4824)	(0.4294)	(0.4307)	(0.4434)	(0.4152)	(0.4274)	(0.3856)	(0.3736)	(0.4398)	(0.3995)	(0.4108)
AgricultureSectorWife	0.0912	0.0044	0.0087	0.0540	0.0070	0.0180	0.0000	0.0174	0.0197	0.0000	0.0107	0.0684	0.0162	0.0022
	(0.2880)	(0.0661)	(0.0928)	(0.2261)	(0.0836)	(0.1332)	(0.0000)	(0.1308)	(0.1391)	(0.0000)	(0.1029)	(0.2526)	(0.1262)	(0.0472)
IndustrySectorWife	0.0982	0.0919	0.0809	0.0808	0.0998	0.1048	0.0800	0.0999	0.0867	0.0803	0.0479	0.1888	0.0478	0.0848
	(0.2976)	(0.2891)	(0.2727)	(0.2726)	(0.2998)	(0.3064)	(0.2716)	(0.2999)	(0.2815)	(0.2723)	(0.2135)	(0.3915)	(0.2134)	(0.2789)
ServiceSectorWife	0.5165	0.5193	0.6021	0.4732	0.5419	0.5593	0.5020	0.5076	0.4393	0.5663	0.5628	0.5651	0.4621	0.5960
	(0.4999)	(0.4998)	(0.4895)	(0.4994)	(0.4983)	(0.4967)	(0.5005)	(0.5001)	(0.4963)	(0.4966)	(0.4961)	(0.4959)	(0.4987)	(0.4912)

Table A. II. 3. a Husband's Income Satisfaction

SatisfHusband	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
	0.4495	0.3386	0.2072	0.3817	-0.0186	1.2775	0.5480	-0.1550	0.2971	0.9273	0.0675	0.1393	-0.2614	-0.0063
ExogWageHusband	[0.4015]	[0.2804]	[0.3883]	[0.1962]*	[0.3583]	[1.4422]	[0.5618]	[0.3868]	[0.3169]	[1.0800]	[0.1186]	[0.3407]	[0.3299]	[0.4785]
	0.9845	0.2976	0.6328	0.2268	1.1821	-0.4790	-0.1190	1.1279	0.9413	0.1634	0.6706	1.0256	1.4922	0.7298
	[0.4912]**	[0.7279]	[0.4824]	[0.3367]	[0.3747]***	[0.7844]	[0.7176]	[0.4460]**	[0.3379]***	[0.8985]	[0.1977]***	[0.3990]**	[0.3489]***	[0.4851]
	-0.0015	0.2197	0.1773	-0.0156	0.0383	0.3304	-0.2043	0.0552	0.0205	0.1209	0.0760	0.0798	0.0719	-0.0585
ExogWageWife	[0.0560]	[0.2039]	[0.0817]**	[0.0658]	[0.0458]	[0.3408]	[0.0806]**	[0.0482]	[0.0351]	[0.5020]	[0.0311]**	[0.0674]	[0.0492]	[0.2643]
	0.0976	-0.0326	-0.1721	0.3451	0.0802	-0.2633	0.4650	0.0196	0.0813	0.0742	-0.0104	0.0549	-0.0230	0.1280
	[0.0844]	[0.2826]	[0.1532]	[0.1176]***	[0.0603]	[0.2809]	[0.1060]***	[0.0644]	[0.0400]**	[0.5889]	[0.0485]	[0.0940]	[0.0579]	[0.2726]
	-0.0521	0.0406	-0.1004	0.0266	-0.0134	0.7977	0.0350	0.2018	0.0056	-0.2235	-0.1916	0.1336	-0.1126	0.0675
Non-LabourHusband	[0.0747]	[0.0956]	[0.1494]	[0.0315]	[0.0968]	[0.9647]	[0.2539]	[0.2065]	[0.0714]	[0.7295]	[0.1191]	[0.3799]	[0.1297]	[0.6045]
	0.3445	0.4210	-0.2465	0.0939	0.3629	-0.1851	0.5285	-0.8094	0.4856	0.3668	0.1178	1.0319	0.1370	-0.9290
	[0.1933]*	[0.3451]	[0.2816]	[0.0360]***	[0.1747]**	[0.6112]	[0.2204]**	[0.4674]*	[0.2045]**	[0.8421]	[0.2243]	[0.5057]**	[0.1320]	[0.9154]
	0.0140	-0.0560	-0.1003	-0.0276	-0.0071	0.7699	0.9232	0.2868	0.0331	1.0313	0.0794	-0.9176	0.0823	1.3320
Non-LabourWife	[0.0623]	[0.0575]	[0.1154]	[0.1252]	[0.0989]	[0.9795]	[0.4385]**	[0.3875]	[0.1447]	[0.9214]	[0.1693]	[0.4912]*	[0.2140]	[0.6480]**
	-0.1074	0.4282	-0.0993	0.1148	-0.1593	-1.3457	0.2605	-0.0899	0.4762	-1.0079	-0.0085	0.5832	-0.6094	-1.7333
	[0.1193]	[0.4341]	[0.2276]	[0.1066]	[0.2213]	[1.5180]	[0.7939]	[0.6921]	[0.2576]*	[1.4397]	[0.2732]	[0.5321]	[0.4248]	[0.9623]*
	-0.1648	0.0894	-0.0816	0.3202	-0.0556	0.0068	-0.6622	0.4334	-0.0175	-3.2878	0.0978	-0.1728	-0.1306	-1.7721
AgeHusband	[0.2040]	[0.2321]	[0.1289]	[0.2738]	[0.2095]	[0.0799]	[0.3731]*	[0.2765]	[0.0971]	[43.6570]	[0.1159]	[0.2539]	[0.1855]	[0.8418]**
	0.2342	-0.3733	-0.0125	-0.4425	-0.0478		0.7075	-0.4398	-0.0146	3.3415	-0.0637	0.2273	-0.0169	1.5934
	[0.2113]	[0.2621]	[0.1481]	[0.2902]	[0.2197]		[0.4107]*	[0.2759]	[0.0990]	[43.4339]	[0.1219]	[0.2687]	[0.1882]	[0.8417]*
	0.2075	-0.1995	0.0083	-0.2711	-0.2848	0.8295	0.9453	0.2533	0.0044	0.5159	-0.1178	0.1529	0.3158	1.9383
AgeHusband^2/100	[0.2608]	[0.2684]	[0.1457]	[0.2350]	[0.1787]	[0.9046]	[0.4493]**	[0.2650]	[0.1139]	[2.7260]	[0.1158]	[0.3544]	[0.2406]	[1.0792]*
	-0.2541	0.5371	0.0870	0.4276	0.3896	-0.7812	-0.9713	-0.2112	0.0271	-0.4245	0.0900	-0.1911	-0.1064	-1.7458
	[0.2690]	[0.3105]*	[0.1750]	[0.2525]*	[0.1920]**	[0.9244]	[0.4864]**	[0.2705]	[0.1199]	[2.8400]	[0.1269]	[0.3669]	[0.2395]	[1.0828]
AgeAverage	0.0626	0.0949	0.0213	0.0933	0.3336	-0.7595		-0.5528	0.0318	3.0698	0.0448	0.0842	-0.0488	0.1296
	[0.0526]	[0.1276]	[0.0644]	[0.1877]	[0.1574]**	[0.7160]		[0.2515]**	[0.0236]	[44.2649]	[0.0628]	[0.0727]	[0.0360]	[0.2221]

	-0.0949	-0.0469	0.0219	-0.0900	-0.3406	0.7372		0.5447	-0.0401	-3.1322	-0.0453	-0.1431	-0.0091	-0.0551
	[0.0456]**	[0.0674]	[0.0584]	[0.1895]	[0.1575]**	[0.7388]		[0.2476]**	[0.0166]**	[44.2343]	[0.0591]	[0.0662]**	[0.0302]	[0.2059]
	-0.0221	-0.1214	0.3050	0.2201	0.0607	1.9961	0.0308	-0.1193	-0.1329	0.4072	-0.0057	0.5638	0.0540	-0.2350
Child<12	[0.1670]	[0.1507]	[0.1902]	[0.2574]	[0.2505]	[2.4247]	[0.4046]	[0.2352]	[0.1373]	[1.2993]	[0.0976]	[0.3048]*	[0.2101]	[1.1694]
	0.1215	-0.1006	-0.1550	-0.6053	-0.1820	-1.9168	-0.1093	0.3851	0.1049	-0.8107	0.4296	-0.3178	-0.1009	0.1292
	[0.2730]	[0.3574]	[0.2821]	[0.3967]	[0.3500]	[2.3451]	[0.5208]	[0.3499]	[0.1787]	[1.5185]	[0.1802]**	[0.4468]	[0.2625]	[1.2422]
	0.1236	-0.1122	-0.1285	-0.1370	0.0168	-0.2744	-0.0410	0.0501	0.0138	-0.8262	-0.0316	-0.2650	-0.2405	0.2160
Children<16	[0.1370]	[0.1664]	[0.0798]	[0.1287]	[0.0962]	[0.5214]	[0.2647]	[0.1259]	[0.0745]	[0.8020]	[0.0565]	[0.2071]	[0.1123]**	[0.4114]
	-0.2862	0.1515	0.0412	-0.0153	-0.0635	0.2122	-0.0752	-0.2055	-0.1032	0.7109	-0.1009	0.0797	0.1880	-0.2160
	[0.1725]*	[0.2362]	[0.1084]	[0.1826]	[0.1159]	[0.5063]	[0.3236]	[0.1561]	[0.0903]	[0.8285]	[0.0779]	[0.2376]	[0.1301]	[0.4345]
	-0.0006	0.0001	0.0012	-0.0006	-0.0019	0.0037	-0.0027	0.0022	0.0023	-0.0394	-0.0025	-0.0033	-0.0028	0.0068
HouseholdProduction	[0.0044]	[0.0026]	[0.0020]	[0.0035]	[0.0025]	[0.0098]	[0.0081]	[0.0040]	[0.0024]	[0.0224]*	[0.0025]	[0.0050]	[0.0027]	[0.0071]
	-0.0083	-0.0015	-0.0028	0.0057	-0.0017	-0.0125	0.0125	-0.0022	-0.0088	0.0586	-0.0073	-0.0043	-0.0070	-0.0154
	[0.0075]	[0.0103]	[0.0036]	[0.0072]	[0.0041]	[0.0159]	[0.0149]	[0.0066]	[0.0042]**	[0.0321]*	[0.0050]	[0.0060]	[0.0045]	[0.0097]
Number of Observations	1436	927	2259	1742	2317	476	326	1075	4441	144	5331	1177	1737	361

Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

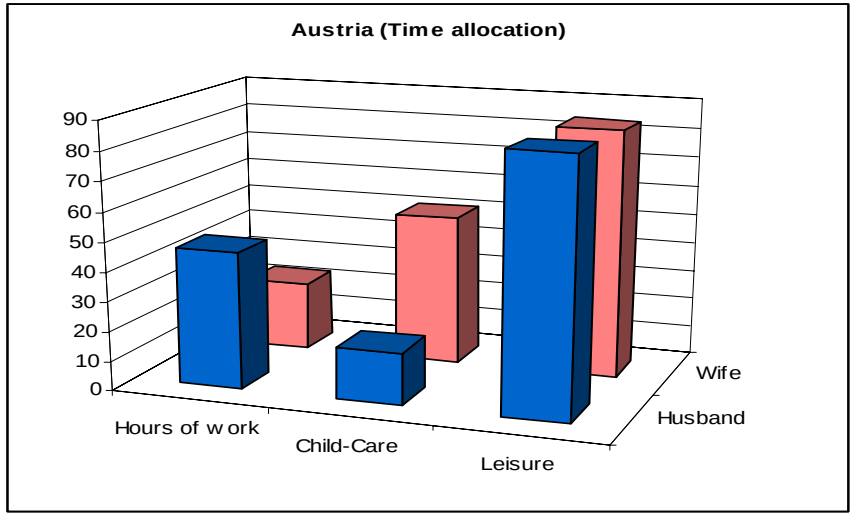
Table A. II. 3. b Wife's Income Satisfaction

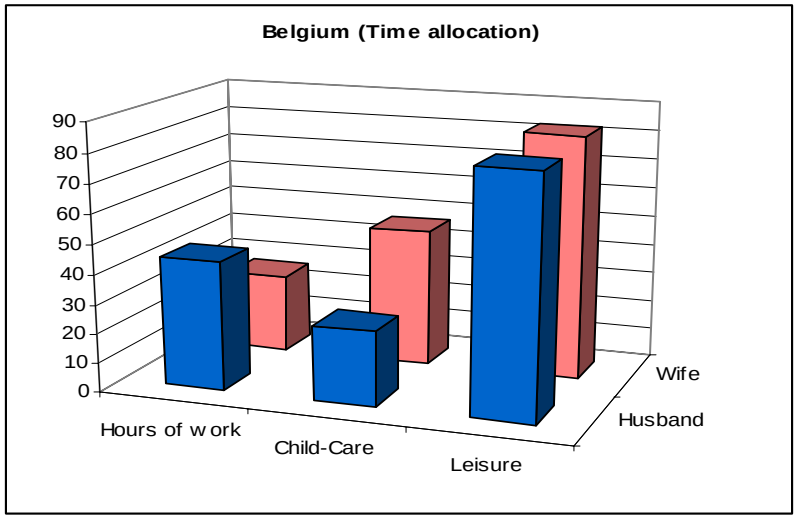
Satisf Wife	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	The Netherlands	Portugal	Spain	UK
	0.6143	0.7404	0.7024	0.0118	0.1193	1.3338	-0.3401	0.0542	-0.5329	1.4598	0.0866	-0.0596	0.2369	-0.3575
ExogWageHusband	[0.3507]*	[0.3557]**	[0.3610]*	[0.1808]	[0.2645]	[0.9058]	[0.5907]	[0.3886]	[0.3328]	[1.4982]	[0.1142]	[0.2868]	[0.2941]	[0.5277]
	0.3502	0.5458	-0.1378	0.2582	0.8912	-0.7016	0.8022	0.3837	1.5177	-0.5279	0.8187	0.8613	0.6732	0.7002
	[0.4384]	[0.7262]	[0.4508]	[0.2528]	[0.2958]***	[0.7277]	[0.6785]	[0.4382]	[0.3488]***	[1.7081]	[0.2298]***	[0.3511]**	[0.3195]**	[0.5109]
	0.1717	0.0982	0.2824	0.2120	0.0927	0.3213	-0.0081	0.1003	0.0082	-0.9825	0.0943	0.2226	0.0001	-0.1818
ExogWageWife	[0.0622]***	[0.2656]	[0.0904]***	[0.0612]***	[0.0502]*	[0.2051]	[0.1460]	[0.0533]*	[0.0344]	[0.5854]*	[0.0332]***	[0.1054]**	[0.0573]	[0.1434]
	0.0169	0.4568	-0.0575	0.1134	-0.0087	-0.2518	0.3451	0.0018	0.1234	1.2124	0.0242	0.1063	0.1034	0.2485
	[0.0848]	[0.3702]	[0.1591]	[0.1128]	[0.0645]	[0.2060]	[0.1540]**	[0.0707]	[0.0397]***	[0.8083]	[0.0534]	[0.1194]	[0.0656]	[0.1555]
Non-LabourHusband	-0.0507	-0.0007	-0.1405	0.1209	-0.2379	-0.0080	0.1954	-0.2740	0.0009	-0.5070	-0.0319	-0.6738	-0.3810	0.0501
	[0.0842]	[0.0948]	[0.1284]	[0.0932]	[0.1280]*	[0.4466]	[0.2288]	[0.2991]	[0.0808]	[0.9141]	[0.1596]	[0.2819]**	[0.1501]**	[0.8899]
	0.2320	0.4132	0.1141	0.0519	0.4849	0.3024	0.4340	-0.2661	0.4265	0.7476	-0.0105	1.3134	0.4516	-0.9134

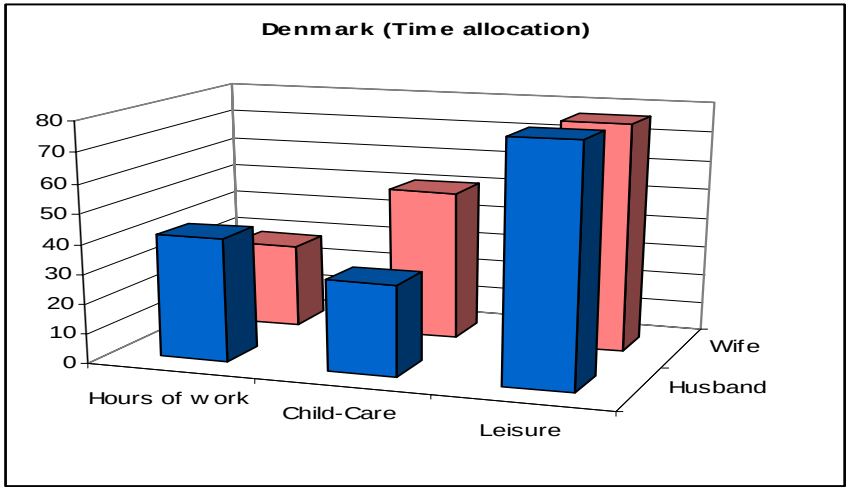
	[0.2140]	[0.3465]	[0.2546]	[0.0813]	[0.2147]**	[0.4575]	[0.2651]	[0.4563]	[0.1936]**	[0.9590]	[0.2285]	[0.4792]***	[0.1498]***	[0.9979]
	0.0051	-0.1144	-0.1086	-0.0724	-0.0342	0.4098	1.4444	-0.2461	0.0962	1.0104	0.1687	-0.8458	0.0306	1.0860
Non-LabourWife	[0.0620]	[0.0450]**	[0.1086]	[0.1404]	[0.1207]	[0.5803]	[0.6542]**	[0.3356]	[0.1283]	[0.9708]	[0.1798]	[0.4060]**	[0.2041]	[0.9672]
	0.0645	0.4109	-0.2635	0.1984	-0.3252	-1.1642	-0.4538	-0.0354	0.5619	-0.1845	-0.5126	0.6490	-0.2384	-1.3973
	[0.1481]	[0.1490]***	[0.2117]	[0.0962]**	[0.2227]	[0.7598]	[1.0268]	[0.4477]	[0.2198]**	[1.7461]	[0.2845]*	[0.4247]	[0.4912]	[1.1884]
	0.0856	0.1782	0.0299	-0.0004	0.3061	0.8452	-0.4040	0.5298	-0.0589	-0.9468	0.1622	0.6198	-0.0824	1.0067
AgeWife	[0.1697]	[0.2747]	[0.1620]	[0.2698]	[0.3369]	[1.0903]	[0.4387]	[0.2893]*	[0.0968]	[2.1904]	[0.1241]	[0.3049]**	[0.1815]	[1.3978]
	-0.0920	-0.3597	-0.1734	-0.2310	-0.3368	-0.8150		-0.4738	0.0474	1.6490	-0.2347	-0.6999	-0.0253	-0.9786
	[0.1696]	[0.2973]	[0.1727]	[0.2814]	[0.3447]	[1.1173]		[0.2953]	[0.1006]	[2.1469]	[0.1317]*	[0.3200]**	[0.1847]	[1.4250]
	-0.2101	-0.1924	-0.1514	0.2033	-0.4329	-1.2287	0.4137	-0.4614	0.0748	1.5386	-0.1348	-0.7762	0.2700	-1.5758
AgeWife^2/100	[0.2132]	[0.3548]	[0.1934]	[0.2309]	[0.1871]**	[1.4185]	[0.6116]	[0.2940]	[0.1207]	[3.2697]	[0.1176]	[0.4478]*	[0.2482]	[1.8385]
	0.1208	0.5073	0.3605	0.0184	0.5022	1.2087	-0.4440	0.4047	-0.0441	-2.4946	0.2050	0.8818	-0.1122	1.4966
	[0.2199]	[0.3865]	[0.2134]*	[0.2445]	[0.2122]**	[1.4316]	[0.6362]	[0.3090]	[0.1289]	[3.1931]	[0.1311]	[0.4622]*	[0.2458]	[1.8723]
	0.0887	0.0405	0.0372	0.0047	0.0737	0.0121	0.0714	-0.0807	0.0115		-0.0073	-0.0061	-0.0757	0.1433
AgeAverage	[0.0877]	[0.1052]	[0.0739]	[0.1580]	[0.3164]	[0.0269]	[0.0452]	[0.2353]	[0.0311]		[0.0807]	[0.0539]	[0.0538]	[0.1043]
	-0.0012	-0.0540	-0.0278	0.0650	-0.1164			0.0928	-0.0338		0.0211	-0.0163	0.0358	-0.1265
	[0.0811]	[0.0829]	[0.0705]	[0.1615]	[0.3155]			[0.2358]	[0.0273]		[0.0785]	[0.0470]	[0.0487]	[0.0940]
	0.0896	0.0589	0.2354	0.4080	0.3548	0.6812	-0.0771	-0.8651	-0.1565	1.6419	0.2299	0.5090	0.0145	0.7974
Child<12	[0.1594]	[0.1310]	[0.1982]	[0.2801]	[0.2618]	[0.7113]	[0.3500]	[0.2676]***	[0.1208]	[1.2764]	[0.0964]**	[0.2771]*	[0.2199]	[0.9644]
	0.1156	-0.0766	-0.0963	-0.5754	-0.5378	-0.4007	0.1162	1.0329	0.1181	-1.9032	-0.0872	-0.8344	-0.0662	-0.9564
	[0.2916]	[0.3591]	[0.2966]	[0.3685]	[0.3631]	[0.6711]	[0.4741]	[0.3924]***	[0.1763]	[1.8245]	[0.1625]	[0.4363]*	[0.2808]	[1.0141]
	0.0532	-0.0280	-0.1187	-0.0361	0.0059	-0.2105	0.0105	-0.0456	-0.0024	-0.7160	-0.0475	0.0906	-0.0876	-0.5352
Children<16	[0.1353]	[0.1625]	[0.0823]	[0.1158]	[0.0968]	[0.4176]	[0.3140]	[0.1215]	[0.0680]	[0.6855]	[0.0565]	[0.2259]	[0.1114]	[0.5036]
	-0.2299	0.1042	0.0953	-0.0243	-0.0762	0.0800	-0.1748	-0.1743	-0.0526	0.0821	0.0089	-0.2292	-0.0008	0.5087
	[0.1662]	[0.3029]	[0.1103]	[0.1327]	[0.1217]	[0.4191]	[0.3539]	[0.1440]	[0.0886]	[0.7945]	[0.0816]	[0.2398]	[0.1296]	[0.5191]
	-0.0001	0.0063	-0.0003	-0.0000	-0.0001	-0.0010	0.0034	-0.0028	0.0021	-0.0504	-0.0044	-0.0125	0.0016	-0.0027
HouseholdProduction	[0.0042]	[0.0027]**	[0.0018]	[0.0033]	[0.0023]	[0.0088]	[0.0080]	[0.0037]	[0.0024]	[0.0360]	[0.0026]*	[0.0060]**	[0.0028]	[0.0088]
	-0.0129	-0.0095	-0.0022	-0.0022	-0.0021	-0.0026	0.0036	0.0092	-0.0061	0.0468	-0.0061	0.0053	-0.0109	-0.0029
	[0.0078]*	[0.0059]	[0.0035]	[0.0051]	[0.0037]	[0.0104]	[0.0152]	[0.0060]	[0.0043]	[0.0435]	[0.0047]	[0.0065]	[0.0047]**	[0.0101]
Number of Observations	1436	931	2255	1883	2333	474	326	1231	4442	144	5330	1178	1738	367

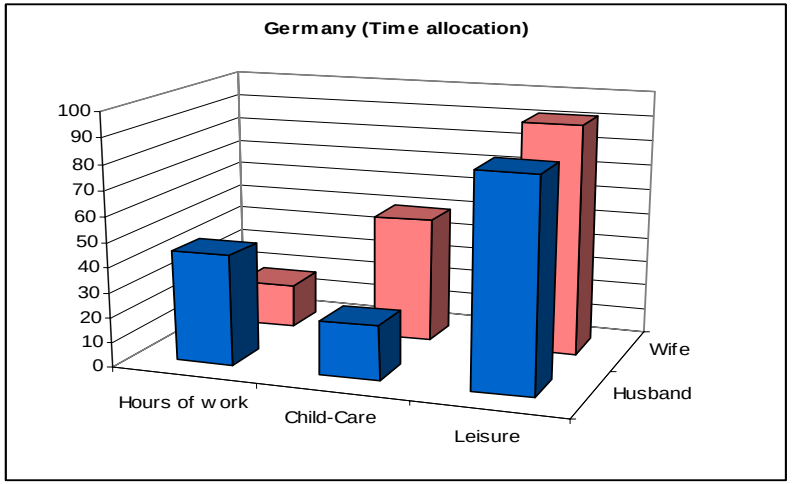
Note: Standard Errors in parentheses. *: indicates individual significance at the 10% level. **: indicates individual significance at the 5% level. ***: indicates individual significance at the 1% level.

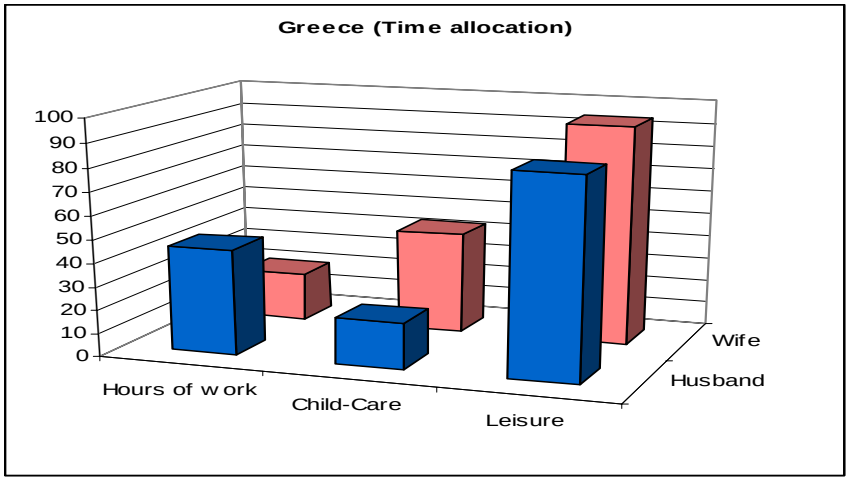
Figure A. II. 2. a to *2. n*

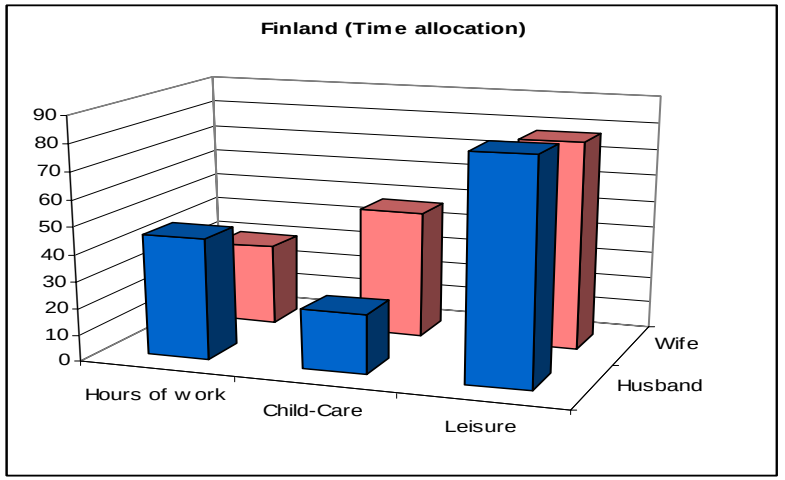


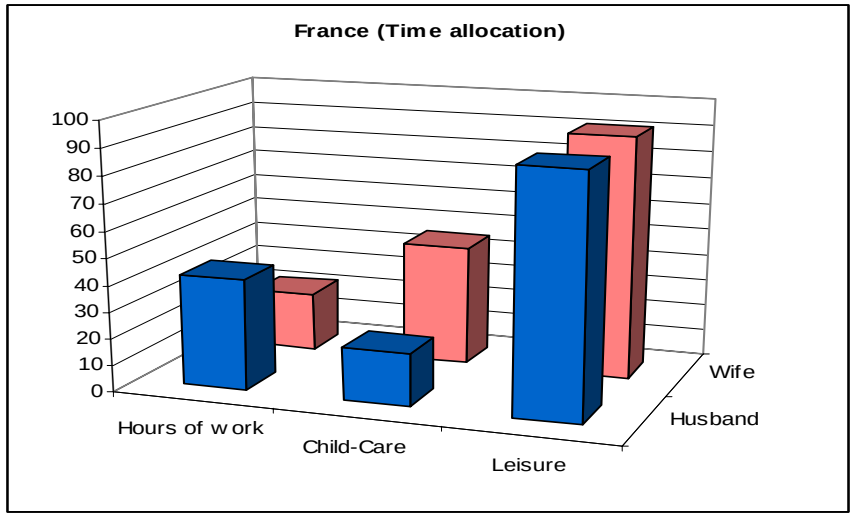


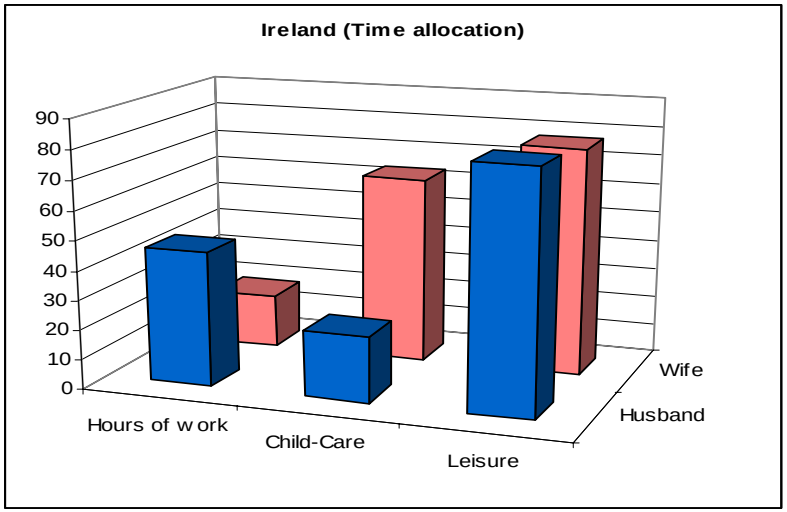

Denmark (Time allocation)
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

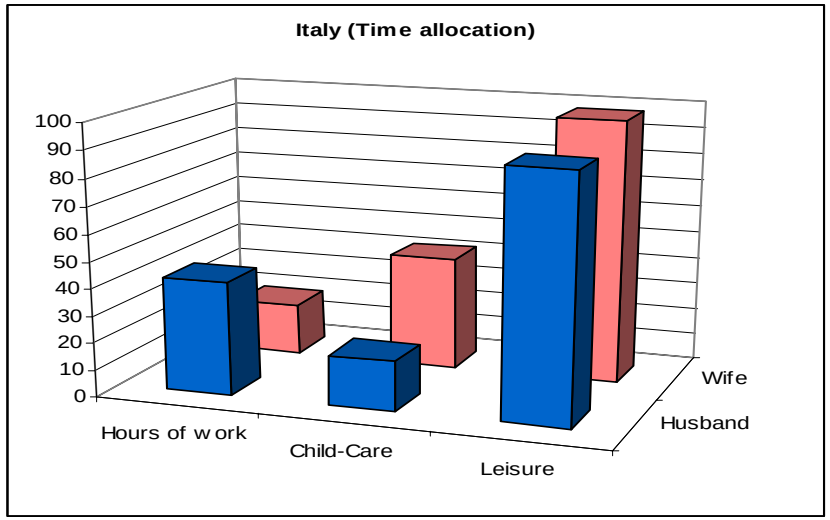

Germany (Time allocation)
100
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

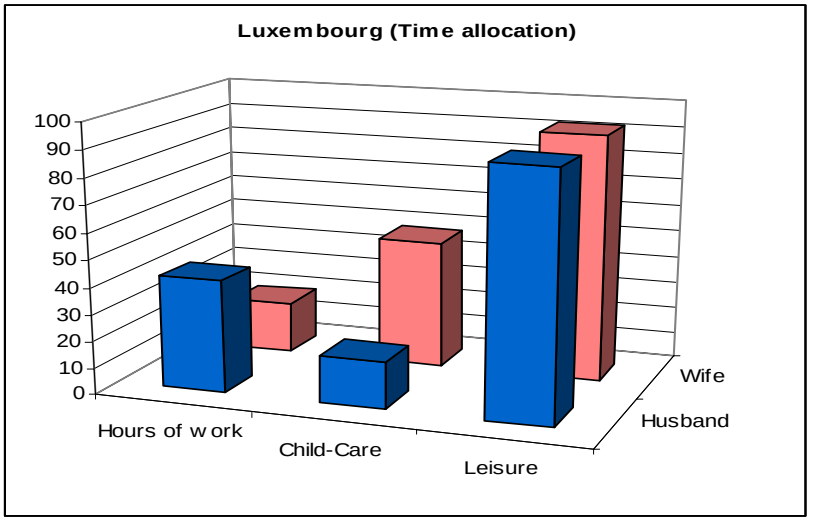

Greece (Time allocation)
100
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

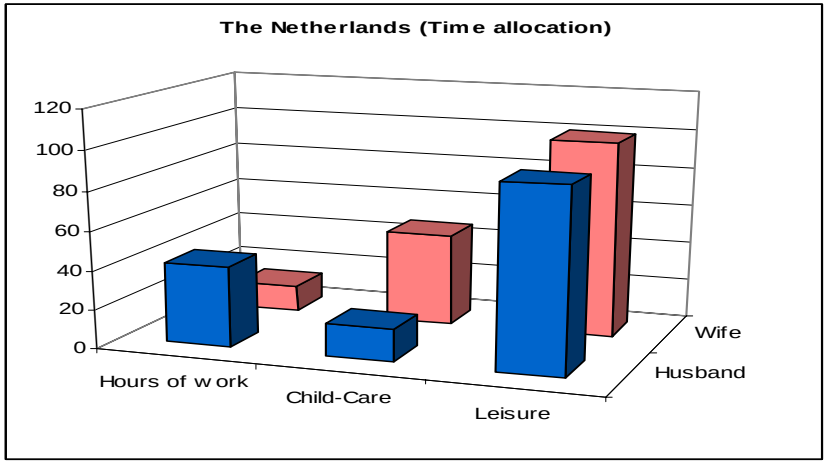

Finland (Time allocation)
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

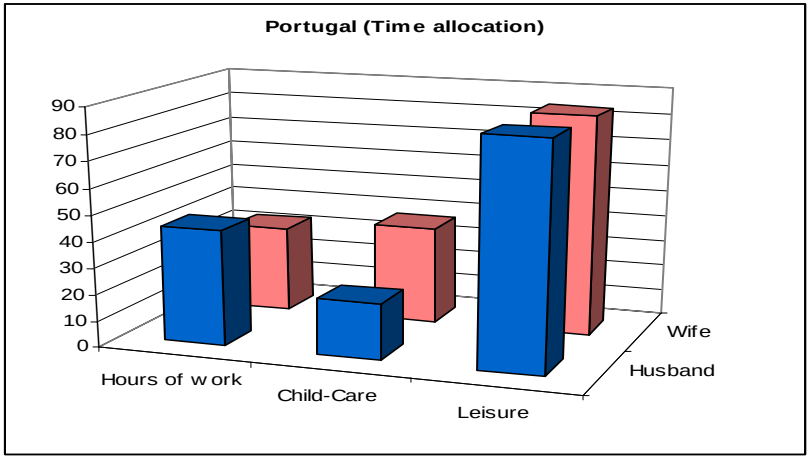

France (Time allocation)
100
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

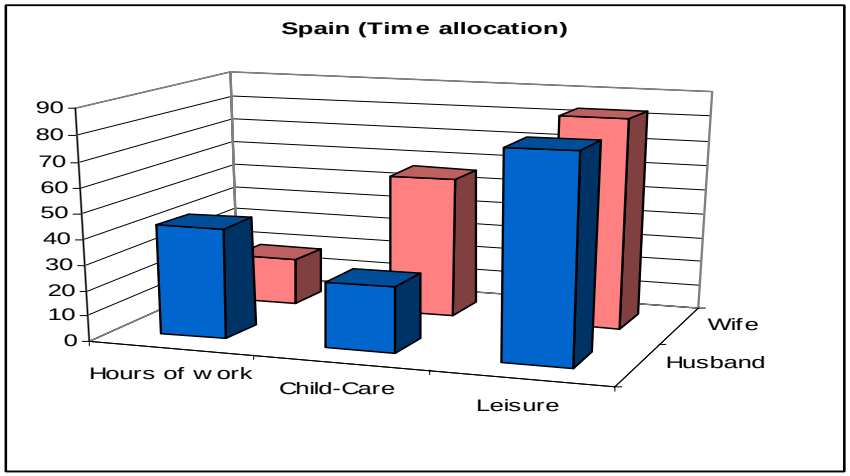

Ireland (Time allocation)
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband

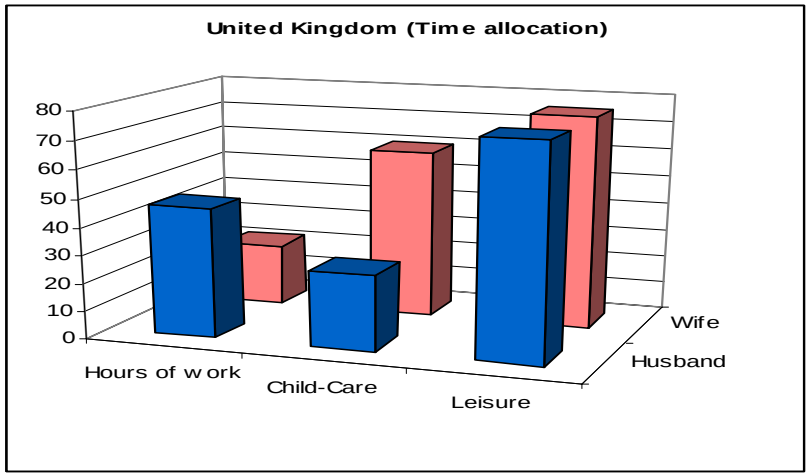

Italy (Time allocation)
100
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband


Luxembourg (Time allocation)
100
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband


The Netherlands (Time allocation)
120
100
80
60
40
20
0
Hours of work
Child-Care
Leisure
Wife
Husband


Portugal (Time allocation)
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband


Spain (Time allocation)
90
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband


United Kingdom (Time allocation)
80
70
60
50
40
30
20
10
0
Hours of work
Child-Care
Leisure
Wife
Husband