

PATTERNS OF LABOUR MARKET INTEGRATION IN EUROPE, A LIFE COURSE PERSPECTIVE ON TIME POLICIES

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Introduction

One of the major objectives of the European Employment Strategy adopted in the Lisbon summit¹ in March 2000 is to increase the overall employment rate, which *inter alia* requires an increase in female employment rates in particular. Such a policy has to be complemented by a pro-active policy to make it possible for both men and women to better balance work and family commitments, particularly in Member States where female employment rates are currently low and the traditional gender division of labour is pronounced. Policy developments are also needed in those countries with higher female employment rates, for there are still reconciliation problems and gender time inequalities in these societies.

Time is a scarce resource and modifications in household composition over time may, depending on the national context, affect differently household's time allocation between paid work and other time consuming activities (childcare, housework, leisure etc). There is ground for thinking that a part of the cross-country disparities in the patterns of labour market integration and gender division of labour over the life course may be ascribed to institutional and economic factors such as the design of family policy, the prevailing tax and benefit systems, the availability and costs of childcare facilities, working time regimes, gender wage differentials and firms' time and human resource management². A number of cross-national comparative studies have shown

¹ At the Lisbon summit in March 2000, the European Union set a quantitative target for the EU working-age employment rate to reach 70 percent by 2010, with a complementary target of a 60 percent employment rate among women and 50% for elderly workers.

² To illustrate: the design of the tax and benefit system, (e.g joint taxation system with high marginal tax rates) may raise barriers and disincentives, affecting the gender division of labour and constraining labour supply of the second earners. The extent to which household may shift or outsource domestic tasks (such as availability and cost of childcare, elderly care etc), are also other examples of factors affecting household's allocation of time between paid work and other activities. The regulatory framework regarding working time may also have an impact on labour supply and affect both the duration and the distribution of working time (see Anxo and O'Reilly (2002)). For instance, the lack of legal opportunities to temporarily adapt working time or the absence of flexible working time arrangements at the firm level may constrain women's participation in the labour market.

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that there is a correlation between particular institutional arrangements and national variations in the extent and form of men and women's working-time. These include the general debates about welfare state regimes and levels of women's employment such as those proposed by Esping Anderson (1990, 1999, et. al 2002) and other feminist research which has focused in more detail on gender relations under different welfare state regimes (e.g. Lewis 1992, 2002, Sainsbury 1994, Drew et al. 1998); as well as more specific studies of working-time regimes and work-family reconciliation measures (e.g. Anxo and O'Reilly 2002, O'Reilly and Fagan 1998, Rubery et al, 1998, 1999, den Dulk et al. 2001). However, in this analysis we advance the debate in two ways. Firstly, whereas most of these studies correlate macro-level aggregate level indicators with institutional arrangements, we are able to test the relationships more directly by using international comparable household-level data for each country in the study. Secondly, we contribute a life course perspective through our cross-national analysis of a number of household situations, in contrast to the approach taken in most previous research which have focussed on comparisons of overall rates or isolating a particular type of household (e.g. households containing young children).

In other words, our starting hypothesis is that the specificity of a country institutional set up and 'time policy' orientation shape the choice household members can make regarding the extent of their labour market participation and the overall gender division of labour over the life course. The prevailing working time regimes, in particular the range of available working time options over the life course may favour or hinder a better balance between work and other time consuming activities. The lack of opportunities to temporarily reduce or increase working time is also one factor explaining the current gap between actual and preferred working time (See Fagan 2001). Institutional barriers hindering men and women to adapt working time in order to cope with various events/risks over the life course have therefore to be identified and removed in order to foster not only gender equal opportunity but also a more efficient and optimal resource allocation.

The main purpose of this paper is to assess, in a European comparative perspective, the extent to which the institutional and policy framework concerning working-time options affects household members' labour market integration over the life course. Hence, the focus is primarily supply-side, although this can also contribute to job creation, for example state provision of childcare and other public services stimulates the demand for women's labour in particular. The paper is structured as follows: Section one reviews the major changes experienced by contemporary societies, with particular focus on working time arrangements and policies. Section 2 analyses gender disparities in the patterns of labour market integration and working time over the life course in seven European countries, using a slightly modified version of the family cycle approach. In the following section we estimate a set of labour supply functions focusing on the impacts of changes in household's composition over the life course, using a Tobit with selection. Finally, the last section provides some concluding remarks.

The gender division of labour over the life course: major trends

One of the most salient trends in advanced economies is the increased feminisation of the labour force, the related shift from the single male breadwinner household towards dual-earners households and the increased diversification of household structures. However, there are still large national differences in the patterns of female labour market integration over the life course.

During the last decades, major changes in the *timing of transitions* over the life course have occurred. Globally, the industrialized countries have experienced a postponement of entry into the labour market due to later exit from the educational system combined with earlier exit from the labour market due to early retirement schemes and a lowering of pension age. Simultaneously, the trends toward individualisation, the emergence of new life styles and changes in values and norms have largely modified the traditional family life cycle model of marriage, parenthood, followed by retirement within a stable marriage, which was still prevalent during the 1950s-1960s (Beck 1992, Giddens 1990). The overall reduction in marriage rates, the increased rates of divorce, consensual unions, lone parenthood, the decrease of family size, the postponement of family formation (average age at first child), rising rates of childlessness and the increase in life expectancy³, coupled to the growing instability in the labour market have certainly modified individuals' expectations and options over the life course. Hence, if the traditional tripartite sequencing of work history (education-employment-retirement) or the sequencing of life critical phases (singlehood, marriage/cohabitation, children, empty nest etc.) remains predominant in many industrial countries, most advanced economies have experienced a *rescheduling* of traditional critical events, an increase of instability and risks (separation/divorce, unemployment) and therefore a growing heterogeneity of life trajectories.

The significant change in the timing of transitions at the two ends of the age distribution has shortened the period of "active working life". The various reforms aiming at reducing weekly and yearly working time have also reinforced the diminution of time spent on paid work. If we take into account the large increase in life expectancy, the time devoted to market work has dramatically decreased during the last decades. Thus there has been both an absolute reduction in the amount of time devoted to market work over the life course, as well as a proportionate reduction relative to life expectancy. This trend applies particularly to men, for as discussed above, in recent decades the time allocated to paid employment during the lifetime has increased for women, partly offsetting the reduction for men.

Time devoted to housework has also reduced due to the growing availability of goods and services offered in the market and/or provided by the public sector (outsourcing). Technological progress and increased capital intensity in home-produced goods and services have also contributed to a huge increase in productivity in the home sector and contributed to the reduction of time spent on household activities. Households contain fewer children, and so the total time devoted to childraising has fallen (even if the time-intensity per child is higher than in earlier historical periods). Hence, globally, the last decades have experienced a large increase of "leisure time" over the whole life course. However, gender inequalities in time-use persist. At the household level, the reduction of men's paid working time has been partially compensated by the increase of female labour supply but the bulk of unpaid housework and care activities are still predominantly performed by women, even though in many countries the male share of household production has increased (see Anxo et al 2002, and Gershuny 2000). The resilience of a traditional gender division of labour has also dynamic implications in

³ Despite its societal and economic importance, the impact of increased life expectancy on the individual's time preference, income and time allocation over the life course have not been thoroughly analysed. Actually, increased longevity may have interesting implications in terms of inter-temporal allocation of time and income and inter-generational transfers. There are reasons to believe that the increased life expectancy and instability of family forms may affect people's expectations and precautionary motives influencing their trade-offs between saving and consumption over the life course and also the inter-generational transfers of time and income (bequests/inheritance).

terms of career prospects, expected life cycle earnings and also welfare development over the life course.

All these socio-demographic factors combined with the more erratic employment paths over the life course, have placed a strong strain on the financing of the welfare states and social protection systems. In a cross-country comparative perspective, one of the crucial issues is therefore to identify to what extent the current patterns of labour market integration and working time profile over the life course affect the sustainability of the social protection system and to what extent the design of the national social protection system, in terms of incentives and disincentives, influence household's patterns of labour market integration and working time profile over the life course.

In this context, it is not surprising that one of the major objectives of the European Employment Strategy is to augment the overall employment rate which is critically dependent upon a further integration of women into the labour market. This employment goal requires therefore the implementation of pro-active policy to make it possible for both men and women to better conciliate work and other social commitments over the life course. Hence, even though time is irreversible⁴, policy reforms aiming at increasing individuals' working time options and ensuring the reversibility of individual choices over the life course might be a good policy instrument for fostering a time and income allocation conducive to an increase in the overall employment rates supporting the sustainability of the social protection system. Such measures would also enhance the quality of life, for many people are employed in jobs with long or variable work hours which are incompatible with family commitments, causing stress and ill-health for the individual and macro-economic costs, for example, in terms of sickness rates (Burchell and Fagan 2004, Crompton and Brockmann, forthcoming)

Gender Disparities in the Patterns of Labour Market Integration and working time arrangement over the life course

Despite these common global trends, large discrepancies still exist between European countries. Several comparative studies (see for ex Lewis 1997, Rubery et al 1999, Anxo, 2004) have clearly shown that gender and household patterns of labour market integration and working time arrangements differ considerably between European Member States. As we noted in the introduction, previous research has demonstrated that these macro-level (aggregate) differences are partly related to the design of welfare states and employment regimes. While a high labour market integration of both sexes *over the entire life course* is typical for the Nordic countries, most other European countries still exhibit strongly gendered patterns of labour market integration over the life course.

In order to map the profile of labour market integration of men and women at different points in the life course we have used a variant of the *family cycle approach* developed by Glick in the late 1940:s (Glick, 1947) Our methodological choice has consisted of selecting a range of household categories coinciding with widely experienced transitions and phases in the life course: transition out of the parental home and entry into the labour market (young singles without children), union formation (cohabiting couples without children), parenting (differentiating couples according to the age of children), midlife empty nest period (middle-aged couples without cohabiting children)

⁴ "Even God could not change the past" Aristotle.

and lastly the elderly phase and exit out of the labour market (couples older than 60 years old). (See the box below).

Although our approach is not longitudinal and mainly based on the seventh wave of the European Community Household Panel (ECHP⁵), it can serve as a heuristic device to identify cross-country differences in the patterns of labour market transitions and integration over the life course and to assess the influence of the societal context on the prevailing gender division of labour. However, one needs to be cautious with the interpretation of the results and bear in mind the usual drawbacks associated with cross-section analysis, in particular the difficulties of disentangling age, cohort and period effects. Furthermore, the family cycle suffers from some limitations that should be stressed. This approach implies a “natural sequence” of predetermined stages in the family’s progression from marriage to widowhood, however, we have already argued that this sequencing of life stages is becoming more diversified in contemporary societies. We make no assumptions about sequencing or duration on the different life stage situations we have selected for analysis, rather in our typology we have sought to include some of the most prevalent transitions and life phases for comparative analysis. This typology does not include all the possible household situations and it leaves out important and growing categories such as for example lone parents or older singles. However, our typology covers 80% of all household categories found in each society at a given point in time (see Anxo and Boulin, 2004, chapter 2 for further details) This stylised household typology which we have devised provides advantages for cross-country comparisons of the different employment rates and volume of working hours by gender according to matched household types.

The Box below summarises the detail of the types of household life phases that we focus on in our analysis.

Box Stylised household life-course typology

Young entrants - single and childless – at the start of their working lives

- 0: Single person (under 36 years), without children

Childless couples

- 1: Younger couples (woman aged under 40 years), without children

Couple households with children living at home

The age of the youngest child is used to indicate the nature of parental responsibilities across the life course, from the intense nature of childcare for pre-school children through to the different needs and demands of children as they grow and become more independent

- 2: Couple with youngest children (youngest child is under 7 years)
- 3: Couple with young children (youngest child is aged 7-12 years)
- 4: Couple with teenage children (youngest child is aged 13-17 years)

⁵ Our simulated life course approach is based on the last wave of the ECHP available at the time of writing, and corresponding to year 2000. In a prior analysis, we selected and compared two years (1995 and 2000) but the differences in the patterns of labour market integration and income development were not significant.

Older couples without children living at home

- 5: Midlife 'empty nest' couples without resident children, (woman aged 40-59 years)
- 6: Older 'retiring' couples without resident children (both spouses aged 60 years or older)

Bearing in mind these limitations, our variant of the family cycle approach gives a first approximation of the impact of the societal context on the prevailing gender division of labour over the life course.

We have applied this categorisation to compare the patterns for seven countries (France, Germany, Italy, the Netherlands, Spain, Sweden and the UK). The selection of country was constrained by data availability within the ECHPS, but within this constraint these countries were selected because they diverge significantly in terms of working-time policy, family reconciliation policies and employment regimes. Thus they permit us to analyse the impact of the institutional set up on the gender pattern of involvement in paid work over the life course.

We have identified four broad patterns of labour market integration and working time arrangements over the life course, presented in Figure 1a-g in the appendix. The labels which we give to these four 'models', and our discussion of the institutional arrangements associated with these patterns of labour market behaviour draws upon the feminist analysis of welfare state regimes which delineates welfare states according to whether policy reinforces or undermines the traditional 'male breadwinner' household division of labour (e.g. Lewis 1992 and ff., Sainsbury 1994), and comparisons of employment regimes which emphasise the societal differences in models of part-time work (e.g. O'Reilly and Fagan 1998). The four which we identify are:

- *The Nordic 'universal breadwinner' model*
- *The 'modified breadwinner' model*
- *The Mediterranean 'exit or full-time' model (Italy and Spain)*
- *The different models of 'maternal part-time' work (Dutch, German and UK)*

The Nordic 'universal breadwinner' model of high and continuous participation over the life course involving long part-time or full-time hours, portrayed here by Sweden, is characterized by high employment rates (in particular at the two ends of the age distribution), high employment continuity (sustainability) over the life course, the highest incidence of dual-earner households and relatively low gender disparities in labour market integration (see Figure 1a in the appendix). In Sweden, neither marriage/cohabitation nor family formation impacts on women's employment rates. The main impact of family formation is a temporary reduction of working hours to long part-time hours while children are young, for example employed mothers with a child aged under 7 years work an average of 33 hours per week. Compared to the other countries, Sweden also exhibits a relatively low gender polarization of working time with an extremely low incidence of couples with either excessive working hours or female marginal part-time work (Anxo 2004). Low overall income inequality including low gender wage differentials, in a context of high average and marginal tax, reinforce the dual-earner system and discourage the use of long working hours. Conversely,

qualification rules for some benefits, like unemployment insurance, include a minimum hour threshold, which discourages the development of marginal part-time jobs. The large opportunities to adjust working time over the life course, through various forms of income compensated legal absenteeism (Parental leave, leave for sick child or relatives) with complete employment guarantees and reversible reductions of working time allow a more flexible management of work and family constraints. Taken together, this policy configuration appears to be an efficient tool to both secure women's labour market integration, foster employment continuity and improve gender equal opportunities.

Figure 1. Patterns of labour market integration and working time over the life course by gender and country

Fig 1a_1g in the appendix

(a) Sweden (b) France (c)Spain (d) Italy (e)Germany (f) Netherlands (g)UK

Source: ECHP and HUS for Sweden, own calculation and Anxo & Boulin, 2004, chapters 2 and 6.

The 'modified breadwinner' model, here illustrated by France (See Figure 1b), is where some women exit the labour market when they have young children while the majority work full-time or long part-time hours in 'reduced hour' arrangements. Hence, in contrast to the situation in the Nordic countries, family formation and motherhood are still associated with withdrawal from the labour market for some groups of women. This life course pattern for French mothers is supported by the high coverage rate and lower cost of public childcare than available in many countries, but in contrast to Sweden provisions are less extensive and this plus the higher unemployment rate undermines the ability of low-qualified women to follow this route (Fagnani 1999, Coutrot et al. 1997). Even though the activity rate of French adult women started to rise for generations from the mid-1950s onwards, the trend is still that younger generations of mothers have more continuous participation profiles across their working lives than their predecessors. When the younger generations enter these older age groups we might expect them to maintain higher levels of labour market integration than is observed for the current cohort of older women, which will operate to reduce the gender gap in working time among older age groups.

The Mediterranean 'exit or full-time' model is exemplified by Italy and Spain. These countries exhibit the lowest female employment rates and the highest incidence of traditional 'male breadwinner' households in our seven-country comparison, but when employed women typically work full-time (figures 1c and 1d). Family formation and the presence of children have a clearly negative impact on female labour market integration, largely in terms of reduced employment rates. The relatively low public provision of childcare facilities for young pre-school children, the low income replacement rate and the weakness of subsequent employment guarantees for parental leave systems still constitutes a barrier to women's labour market integration and promote the 'housewife' system of childcare and the 'male breadwinner' system of family provisioning. The prevailing working-time rigidities, in particular the low availability of part-time jobs constitute a barrier to women's labour market integration and encourage a traditional gender division of labour. In both countries there is a strong cohort trend of higher labour market participation profiles emerging for younger and better-educated generations of women across the period of family formation and into the older age groups. However, in both countries, the difficulty of combining employment with motherhood has contributed to the accompanying sharp decline in fertility rates. Younger generations of women defer or avoid motherhood in order to become established in the labour market, particularly in the context of high unemployment, compounded in the case of Spain with a high incidence of temporary contracts. A dualism thus exists in women's life course profiles in these countries. In one camp are the women who manage to become established in the labour market and try to remain there through participating full-time and continuously. In the other are

women who are largely excluded because they have failed to gain secure employment or have exited due to family responsibilities and are unable to re-enter.

The different Dutch, German and UK models of 'maternal part-time' work: The 'female part-time' model is typified by the UK, Germany, and the Netherlands. Here the onset of motherhood is associated with a reduction in the employment rate that is less than that found in Italy or Spain, but where part-time hours are the norm for mothers and generally remain the norm even when children are older (see fig 1e-1g). Furthermore, the hours worked by part-timers are typically shorter than the more substantial part-time hours that prevail in Sweden and to a lesser extent in France. These 'part-time' models are underwritten in the welfare state regimes in all three countries. For example, public child care services were limited (they were extensive in pre-unification East Germany but were subsequently reduced) until the recent pressure to expand to meet the Lisbon targets. While child care is now expanding it still falls short of that found in France and the Nordic countries. In the case of Germany, the part-time model is further supported by the tax splitting system and other financial transfers that discourage full-time employment for wives, and an extended parental leave system which encourages exits or part-time employment.

However, there are salient differences in the quality of part-time work in these three countries, representing different working time regimes. The Dutch part-time model in many ways constitutes the best practice form of 'integrated' part-time work, while by comparison the UK part-time model is characterized by a predominance of very poor quality part-time work, Germany falling between these two poles (Fagan et al. 1998, Plantenga 1997). Compared to Germany and the Netherlands, the incidence of long working hours is very high and the gender polarization of working time is much higher in the UK (see Anxo and O' Reilly, 2002, Fagan 2004). Relatively large wage inequality coupled to high returns to education in a context of low taxation foster a tradition of long hours. The incidence of long working hours in the UK appears also to be high in the two tails of the wage distribution. In one hand, due to the low degree of de-commodification and relatively high incidence of low paid jobs, men who are low-skilled/low paid workers have a higher propensity to work long hours to secure a decent 'male breadwinning' income. On the other hand, highly educated men and women have also clear incentives to work long hours due to relatively high returns to education, low marginal and average tax rates and also large possibilities to outsource a part of the domestic tasks to the market⁶.

Socio-economic determinants of labour market integration and working time: an econometric approach.

Even though the identified patterns of labour market integration over the life course reveals some interesting features, the observed cross-country discrepancies may conceal important structural differences in household characteristics and composition.

⁶ In the Anglo-Saxon liberal regimes the prevailing wage distribution has encouraged the development of a low paid and labour intensive private service sector for household related activities. The possibilities for high income household to outsource a part of the domestic tasks to the market make it possible for both high educated/paid male and female to work long hours. In the Nordic Social democratic regimes, on the other hand characterised by a much lower level of income inequality, an extensive provision of public services (childcare, elderly care) and high average and marginal tax rates, the incidence of long hours remains very low.

As van der Lippe and van Dijk (2002) argue, this is one of the main weaknesses of simple macro-level correlations between aggregate data and institutional regimes, and thus it is important to develop comparative analyses which compare the effects of individual and household characteristics on outcomes in different national contexts. Following our previous argument that national differences in policy regimes, particularly in relation to time (working-time policy and employment regulation, reconciliation policies including childcare services) influence employment patterns, we run separate models for each country. This allows us to compare the effect of individual and household characteristics in different national settings.

Hence, the objective of this section is to bring both the ‘macro’ and ‘micro’ together to control for these factors and shed some light on the socio-economic determinants of the gender allocation of paid work by using a standard econometric approach, namely a Tobit model with selection⁷. In particular, we explore to what extent changes in household composition over the life course affect the gender division of paid work. We include therefore the various household categories used in our stylised life course (See above Box 1 page 5) as explanatory variables for identifying the cross-country differences in the patterns of labour market integration of men and women. The category “young couples without children” is used as the reference group. Besides the types of household, we control also for the level of educational attainment, for non labour income, and region of residence (Germany, the UK, Spain and Italy). A detailed description of the results is reported in tables A3a and A3b in the appendix. Table A3a upper panel displays the estimates of marginal effects calculated at sample means for females (A3b for male) and the lower panel of table A3a presents the proportion (α) of the total marginal effect that can be ascribed to changes in the level of labour market participation ($1-\alpha$, representing the impact on working hours). Some interesting cross-country differences may be observed.

Compared to young childless married/cohabiting women, *young single* women without children in France, Italy⁸ and in Spain work on average more, and the largest part of this effect may be ascribed to a higher level of labour market participation. In other words, our results suggest that union formation in these three countries is still associated with a decline of female labour market participation. In the case of Italy and Spain, young women only live on their own if they have a good job, otherwise they stay at their parents’ until they get married. In Germany, the Netherlands, Sweden and the UK the “single coefficient” is negative indicating that on average childless married women have a higher degree of labour market commitment than young childless single women. This suggests that union formation in these countries is no longer associated with a withdrawal of women from the labour market.

For young males, to be single is generally negatively correlated with market work⁹. In other words, the transition from “singlehood” to union formation implies normally an increase in male labour supply. Interesting country differences are, however, worth

⁷ This method presents the advantage of decomposing the impact of an explanatory variable on the decision to participate in the labour market in one hand and the impact on working time on the other hand given participation (see Anxo et.al 2002, for a technical presentation).

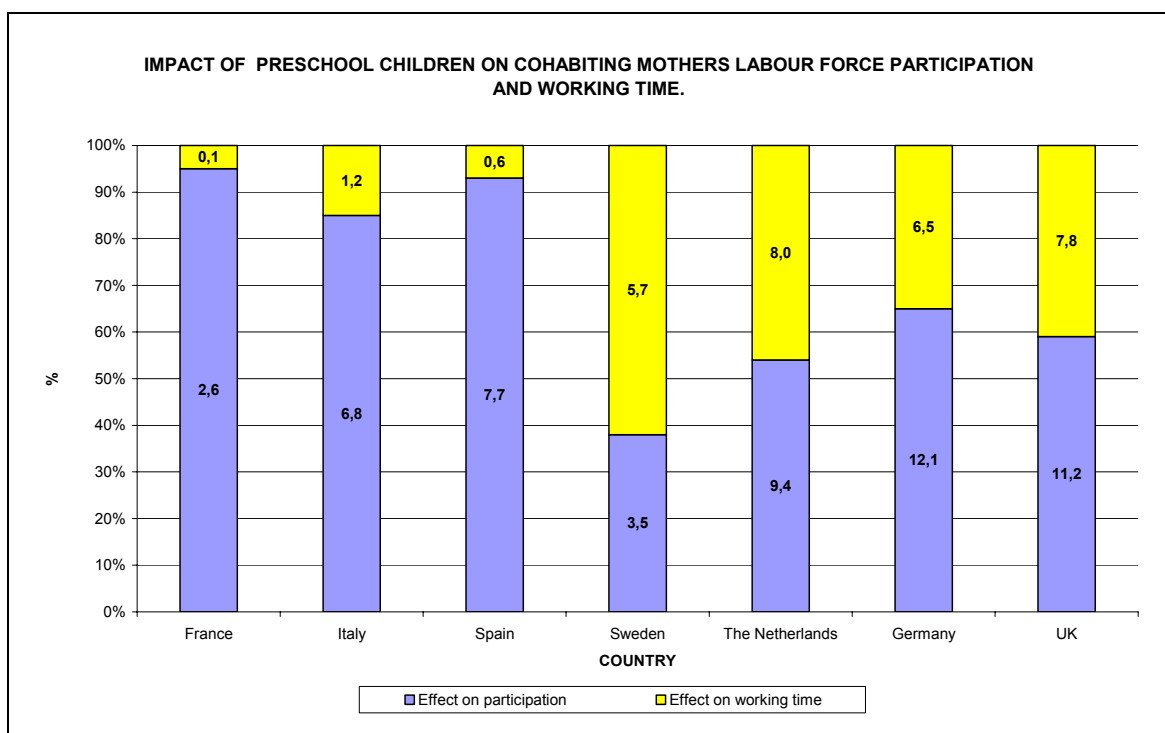
⁸ In Italy the marginal effect is positive but not significant at conventional levels.

⁹ The only exception is found in Sweden and Spain where no significant differences could be found between young childless single and young married/cohabiting men.

noting. While in France and in the UK the larger impact is found on participation, in Germany and the Netherlands the increase in labour supply connected to union formation is more evenly distributed between an increase in labour market participation and an increase in working time (See Table A3b lower panel).

Not surprisingly, in *couples with pre-school children*, mothers do reduce their labour supply, but the impact of young children vary considerably across the countries. In France, Spain and Italy the largest impact of pre-school children on mothers' labour supply is on participation and to a lesser extent on working hours (see Table A3a and Figure 2 below).

Figure 2: Impact of pre-school children on cohabiting mothers labour force participation and working time. Reference category young childless cohabiting women



Explanation of Figure 2: In Sweden, mothers of pre-school children have a lower labour supply compared to young childless cohabiting women, on average 9,2 hours less per week. Around 40% of this reduction may be ascribed to a temporary withdrawal of the labour market (3,5 hours) whilst 60% can be ascribed to a reduction of working time (5,7 hours) given participation. On the other hand, in Spain the reduction of mothers' labour supply amounts to 8,3 hours but almost the whole effect (93%) can be ascribed to a withdrawal from the labour market (7,7 hours).

Source: ECHP wave 7, HUS 1998 and own calculations.

In the UK, Germany, the Netherlands and Sweden the effect of young children takes principally the form of a reduction of working time. This is largely explained by the substantial opportunities to work part-time and the more flexible opportunities to reduce working time in connection to childbirth, in those countries, compared to France, Italy and Spain where mothers still withdraw from the labour market when they have young children. We should also recall that the reduction of working time for Swedish mothers

is largely through reduced hours within the parental leave system and in the context of higher employment rates compared to the different 'part-time models' of Germany, the Netherlands and the UK discussed above. (see Table A3b upper panel).

It is well known that the incidence of part-time work varies across countries. In Germany, the Netherlands or the UK, the majority of women in couples with young children and a partner in full-time work tend to work part-time rather than full-time, while in the case of Spain or Italy mothers tend to withdraw from the labour market. As mentioned previously, those differences are partly related to working time regulations, firm's human resource management, the provision of formal childcare for very young children, as well as parental leave policies (for both mothers and fathers). Our model is thus able to capture and quantify the differential response of women to childbearing: withdrawing from the labour market in the first group of countries (Mediterranean countries and to a less extent in France) and reducing working hours in the other countries.

For fathers of pre-school children, we found the reverse effect, i.e an increase in labour supply in France, Italy, and Sweden, the largest share of this effect concern primarily the extent of participation. In Germany, The Netherlands, Spain and the UK, on the other hand, fathers' labour supply is not affected by young children, be it in terms of participation or working time (See Table A3b).

Even though the impact of children on women's labour supply declines with the age of children, mothers still bear a disproportionate burden of caring responsibilities compared to fathers; for them, family responsibilities often have a significant and long lasting effect on their employment patterns and earnings prospects. However, cross-country differences must be stressed. In Sweden and France, the extent of labour market commitment of mothers with children older than 6 years is not significantly different from childless married/cohabiting women, which implies that the negative impact of children is limited to couples with pre-school children. In the other countries, children have a longer echoing effect (hysteresis) on female labour supply, mainly in terms of labour market participation in Spain and Italy and working time reduction in Germany, The Netherlands and the UK (see Table A3a)

For older couples without resident children (empty nest), the extent of labour market commitment of women is generally lower than for young childless married or cohabiting women, reflecting some cohort effect, women living in these households belong to older generation with more erratic and less continuous employment trajectories. A notable exception is again Sweden where women in this household category do not depart from women in their category "young couples without children". It is obvious that, although there are still significant gender differences in employment patterns and trajectories, the extent of freedom to choose in this respect and the range of opportunities that European younger generation of women have today is infinitely greater than their grandmothers, and sometimes their mothers, had.

For the last category of households, "*Older retiring couples without resident children*", we again find important cross country differences, reflecting different exit patterns at the end of working life. The reduction of labour supply tends to be stronger, for both males and females, in Germany, the Netherlands and the UK, and also for French males, the effect being smallest in Sweden and Italy irrespective of gender¹⁰. As expected, almost all the reduction of labour supply may be ascribed to exit behaviour (see Table A3b), with some exceptions (females in the Netherlands, Sweden and the

¹⁰ With Spain in an intermediate position, with a coefficient in the case of females similar to that of France.

UK, and males in Sweden) where the impact is more evenly distributed between exit and reduction of working time. These contrasting exit behaviours reflects partly institutional differences in statutory pension age, the extent of early retirement schemes and also national differences in firms' human resource strategies towards older workers.

Educational attainment¹¹ has the expected signs according to standard human capital theory: the higher the educational level, the higher the extent of labour market commitment. Overall, the impact of educational attainment on labour supply has also a lower magnitude for men than for women. Some important cross-country differences in the impact of education exists, however. For women in France, Italy and Spain low educational attainment has a strong negative correlation with the level of labour market participation and conversely for highly educated women (high polarisation between low and high educated women). This is in contrast to Sweden (and other Nordic countries) where the impact of educational attainment on participation rates is much weaker and instead impacts on the volume of working hours.

According to standard labour supply theory, non-labour income has a negative effect on participation, as higher non labour income tends to raise reservation wage and hence makes, other things being equal, participation less attractive. This seems also to be confirmed by our results since the major part of this negative effect may be attributed to a reduction of participation and not to any change in working hours except for Dutch males, where an increase of non-labour income affects equally the extent of participation and the volume of working hours given participation (see table A3b, lower panel).

As far as geographical disparities are concerned, we found significant differences in three of the four countries for which this variable was introduced: in Germany (West and East), Italy and Spain (north and south) but not for the UK. As shown in Table A3a in the appendix, living in the South of Italy or Spain reduces significantly married female labour supply but has a reverse effect for married/cohabiting women living in the eastern part of Germany. Here again a decomposition of the total marginal effect reveals interesting country differences. While the largest part of the effect may be ascribed to a reduction in the level of labour market participation in Southern Italy and Southern Spain, in Eastern Germany, the largest part of this effect can be attributed to an increase in working hours.

Conclusion

As shown in this paper, the extent of labour market integration and working time patterns over the life course varies considerably across industrialized countries, household types and gender. We have been able to show that these national variations persist once we control for individual and household-level characteristics, thus confirming the important influence of the institutional 'time policies' found in different regimes upon the gender division of paid work,

¹¹ The educational variables retained in the estimation are split into three different levels (compulsory, intermediate- and higher-level education.). The lowest educational level consists of compulsory elementary school (or less) and brief vocational training (ISCED 0-2 in the ECHP). The difference between low and intermediate is the completion of either higher vocational training or upper secondary school (ISCED 3, in the ECHP). The 'high attainment level' category includes individuals with college or university degrees (ISCED 5-7, in the ECHP). In the estimation the omitted category is the intermediate level.

Family formation and young children have a strong gender-differentiated impact on labour market participation and working time patterns. Overall, union formation and children have a positive impact on the male labour supply, principally in terms of increase of participation than in terms of a lengthening of the average weekly hours. However, the impact of household composition on men's behaviour is much less than that on their female counterpart. For women, the impact of family formation and young children on labour market integration differs considerably between the various Welfare States and employment regimes. The results of our estimations indicate that in France and to a larger extent in Italy and Spain pre-school children reduce women's participation while in the other countries young children reduce principally the volume of working hours.

From a life course and cross-country perspective, we have shown that the Nordic working time regime, portrayed here by Sweden, constitutes the more integrated and coherent system of time and income management over the life course. Family formation is positively related to female labour market participation and the impact of young children on female labour supply remains limited to very young children. Actually, the large palette of individual working time options in Sweden backed with a complete employment guarantee gives large opportunities for households to adapt their working time to various situations and commitments over the life course without large income loss. Sweden constitutes a good illustration of a regime of *negotiated flexibility* where the social partners are largely involved in the shaping of working time options ensuring its social legitimacy. In Sweden the working time options over the life course seem also to be better adapted to companies' productive requirements and employees' needs and preferences.

In the other European countries surveyed in our study, the legal opportunities to adjust working time over the life course appear to be much more limited, fragmented and often restricted to specific phases, specific bargaining areas or companies. These legal options are furthermore associated with a weaker employment guarantee and often entail a larger income reduction compared to the Nordic countries. In the Mediterranean conservative regimes and to a lesser extent in France, union formation and motherhood are still associated with a sharp decline in women's labour market participation. The relatively low public provision of childcare facilities for young pre-school children, the low income replacement rate and the weakness of subsequent employment guarantees for parental leave systems, still support in the Mediterranean countries the notion of the housewife system of childcare and the male breadwinner system of family provisioning. Furthermore, working time rigidities, in particular the low availability of part-time jobs, restrict female labour supply and reinforce the male breadwinner model. Between these two polar cases, the negative impact of family formation on women's labour force participation in Germany, the Netherlands and the UK remains more limited. The impact of family formation and children in those countries takes essentially the form of a large increase of part-time work, in particular marginal part-time. This part-time model of maternal employment has a major impact on women's lifetime earnings profiles over and above the lower total earnings accumulated from shorter hours of work: part-timers typically incur a 'part-time pay penalty' in terms of lower hourly rates and reduced career advancement over the lifetime following a period of part-time work. This part-time pay penalty is particularly pronounced in the UK (Francesconi and Golsing 2005), in contrast to the more integrated form of part-time employment which prevails in the Dutch model (O'Reilly and Fagan 1998, Plantenga 1997).

Several policy implications might be drawn from this comparative analysis. The wide range of households needs as regards working time patterns, related in particular to

changes in household structure and composition, points to the need for policies which support a more flexible adaptation of working time over the life course. While statutory limitation of long working hours or general reduction of standard working time may, for countries with a high incidence of long hours, be a means for curbing excessive hours, the need for working time flexibility over the life course, reflecting various household situations and working conditions, cannot be satisfied only by standardized or statutory regulations giving little room for individual differentiation. Hence, the heterogeneity of household needs and preferences require more legal options to adapt working time over the life course, favouring a better conciliation between paid work and other social activities. Policy measures, therefore, have to be undertaken, to extend the range of working time options in order to better adapt working time to various events/risks over the life course. Some national initiatives, like recently in the Netherlands, to secure, through statutory provision, the individual right to *modulate* working time over the life course appears promising and largely in line with the European Employment Strategy. Weaker variants of this 'right to request' have also been introduced in Germany and the UK. In our view, an increased individual freedom in time allocation over the life course not only has to be guaranteed through the application of a universal citizen right, like in the Netherlands, but also has to be complemented by an integrated system of income redistribution and income transfers like in Sweden. Removing rigidities in the prevailing working time regimes, in particular by increasing the range of statutory and/or negotiated options to adapt working time over the life course without large income loss appears, therefore, crucial not only in terms of gender equal opportunities but also in order to secure a more optimal and efficient allocation of time and resources over the life course.

At the European Union level, the idea of promoting time flexibility in working life has been a key issue in efforts to improve the employment content of economic growth. In order to promote a more modern labour organisation, the social partners have been exhorted during the last decade to negotiate agreements, at the appropriate level, to introduce flexible and innovative methods of labour organisation reconciling a firm's competitive constraints and employees' preferences and needs regarding working time patterns. This quest for new forms of *negotiated flexibility* has taken the form of agreements on reductions of working time, the "annualisation" of working hours, the development of part-time work, "lifelong" education and career breaks (parental leave). Even though these efforts at the EU level to promote the emergence of a negotiated flexibility are partly in line with the idea to increase the variability of working time over the life course, they are still piecemeal measures and not part of an integrated model combining reforms of family policy, social protection systems and the allocation of time. As noted previously, the European Employment Agenda decided at the Lisbon summit in 2000 (quantitative employment target) is critically dependent upon the further integration of women into the labor market. However, as stressed by Rubery et. al (2001), the European Commission still have limited competence in areas of family, social, and welfare policy. Hence, there is ground for thinking that the outcomes of this common strategy will also be highly variable. The European Employment Agenda requires the adoption of a broader policy framework for the transformation of household, welfare and employment regimes. To what extent the broader policy agenda can or should be established at the European level is a crucial issue for the political and economic debate.

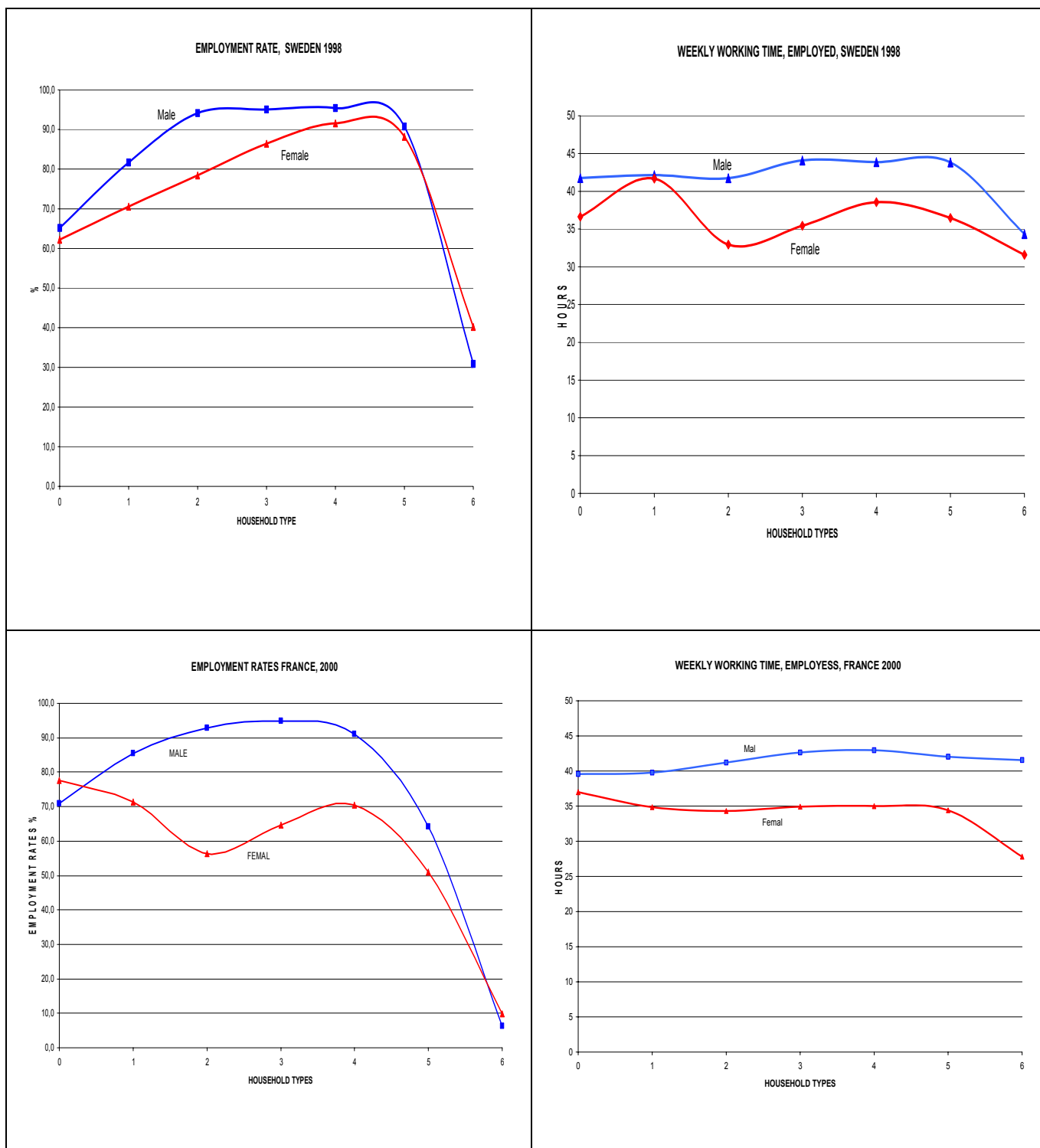
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Patterns of Labour Market Integration and Working time profile over the Life Course

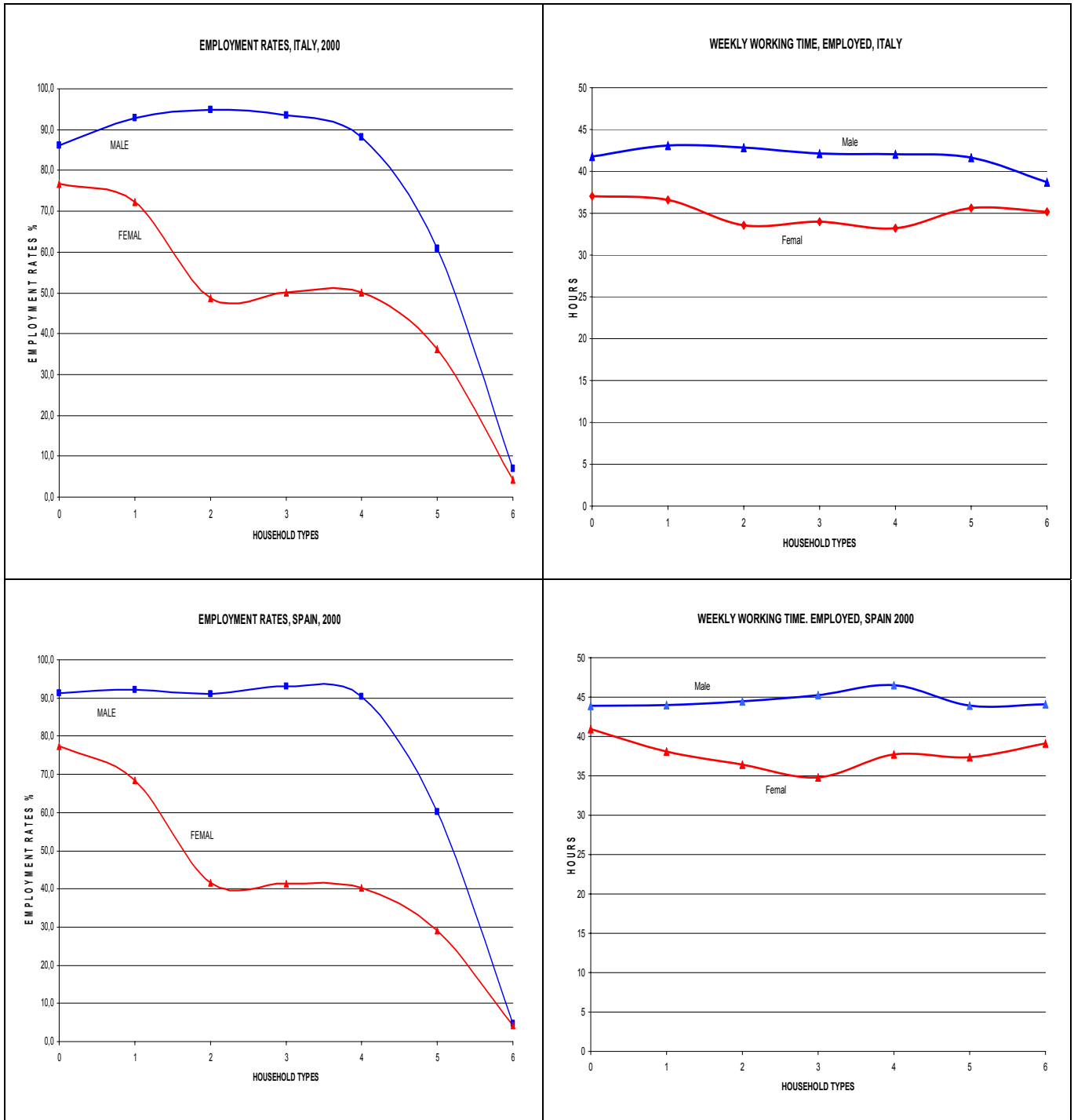
Figure 1a and 1 b: Sweden and France



- 0. Young Singles without children
- 1. Young couples without children
- 2. Couples with pre-school children
- 3. Couples with children less than 13 years old
- 4. Couples with children older than 13 years old
- 5. Couples without children female older than 45 years old
- 6. Old couples without children (spouses older than 60 years old)

Source: HUS, ECHP and own calculations, Anxo & Boulin (2004)

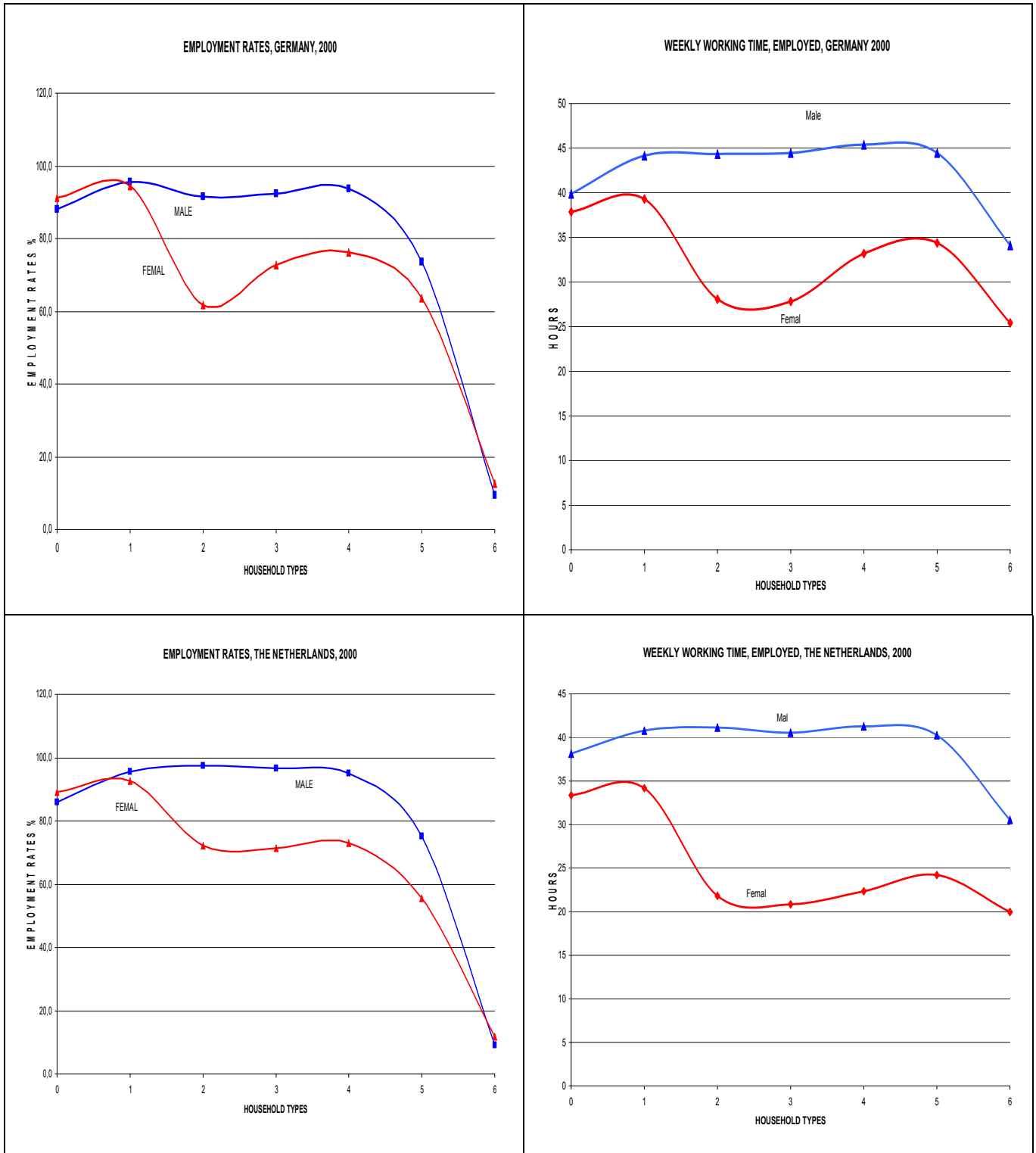
Figure 1c and 1d: Italy and Spain



- 0. Young Singles without children
- 1. Young couples without children
- 2. Couples with pre-school children
- 3. Couples with children less than 13 years old
- 4. Couples with children older than 13 years old
- 5. Couples without children female older than 45 years old
- 6. Old couples without children (spouses older than 60 years old)

Source: HUS and ECHP and own calculations, Anxo & Boulin (2004)

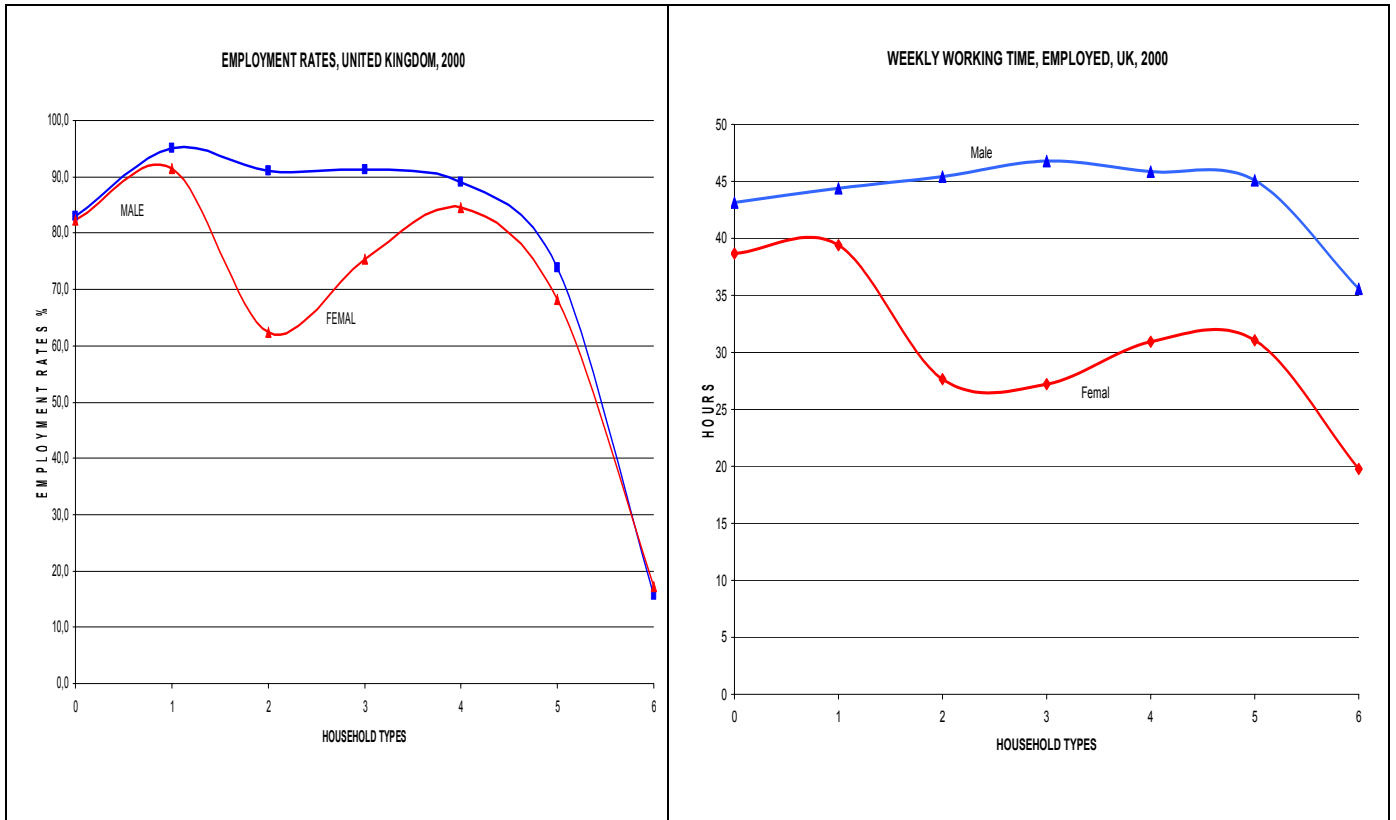
Figure 1e and 1f: Germany and the Netherlands



- 0. Young Singles without children
- 1. Young couples without children
- 2. Couples with pre-school children
- 3. Couples with children less than 13 years old
- 4. Couples with children older than 13 years old
- 5. Couples without children female older than 45 years old
- 6. Old couples without children (spouses older than 60 years old)

Source: HUS and ECHP and own calculations, Anxo & Boulin (2004)

Figure1g: United Kingdom



- 0. Young Singles without children
- 1. Young couples without children
- 2. Couples with pre-school children
- 3. Couples with children less than 13 years old
- 4. Couples with children older than 13 years old
- 5. Couples without children female older than 45 years old
- 6. Old couples without children (spouses older than 60 years old)

Source: HUS and ECHP and own calculations, Anxo & Boulin (2004).

Table A1. Descriptive statistics: couples, both spouses 20-64 years old,

	France 2000 MEAN	Germany 2000 MEAN	Italy 2000 MEAN	Nether- Lands 2000 MEAN	Spain 2000 MEAN	Sweden 1998 MEAN	United Kingdom,2000 MEAN
Cohabiting or Married Female							
Age	42,3	43,7	43,0	43,00	42,9	45,4	43,7
Education low	0,62	0,17	0,54	0,28	0,65	0,28	0,56
Education medium	0,12	0,65	0,37	0,55	0,16	0,48	0,13
Education high	0,27	0,18	0,08	0,17	0,19	0,24	0,31
Employment rates	0,60	0,68	0,47	0,66	0,41	0,77	0,73
Hours worked per week	20,7	21,0	16,2	16,0	15,4	28	22,0
Hours worked per week employed	34,6	30,8	34,1	24,2	37,5	35,9	30,1
Hourly wage (€)	11,0	11,0	9,0	13,0	7,0	10,7	12,0
Labour income (€)	9887	7512	4927	6570	3764	14913	10619
Non- labour income (€)	1402	1774	812	876	368	-368	2704
Cohabiting or Married Male							
Age	44,6	46,4	46,2	45,3	45,4	46,9	45,8
Education low	0,65	0,10	0,56	0,20	0,62	0,29	0,43
Education medium	0,10	0,57	0,34	0,57	0,16	0,5	0,14
Education high	0,26	0,32	0,09	0,23	0,22	0,21	0,43
Employment rates	0,83	0,84	0,85	0,87	0,87	0,88	0,86
Hours worked per week	34,9	37,0	36,2	35,6	39,3	38,2	39,2
Hours worked per week employed	42,1	44,2	42,5	40,9	45,1	43	45,5
Hourly wage (€)	13	15	10	18	9	13,5	18
Labour income (€)	20140	19955	13503	18916	14152	24415	23502
Non- labour income (€)	4253	4283	2110	3097	1183	369	3234
Household variables:							
<i>(when both members are 20-64)</i>							
Number of children	1,04	0,88	1,01	1,03	1,09	1,1	1,01
Children 0-6	0,39	0,23	0,32	0,28	0,28	0,39	0,33
Children 7-12	0,34	0,31	0,36	0,38	0,38	0,34	0,36
Children 13-17	0,32	0,34	0,33	0,37	0,43	0,37	0,32
Sample size	2142	2894	3204	1664	2551	568	1654

Note: All income measures in EUR.

Source: ECHP wave 7, HUS 1996 and own calculation .

Table A2. Descriptive statistics. Singles, 20-64 years old

	France 2000	Germany 2000	Italy 2000	Nether- lands 2000	Spain 2000	Sweden 1998	United Kingdom 2000
	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
Female							
Age	43,4	41,7	46,5	43,3	46,5	42,5	41,9
Number of children	0,47	0,41	0,34	0,37	0,39	0,52	0,73
Education low	0,58	0,15	0,47	0,30	0,53	0,22	0,42
Education medium	0,10	0,64	0,41	0,52	0,17	0,41	0,15
Education high	0,33	0,20	0,12	0,19	0,30	0,36	0,44
Employment rates	0,67	0,72	0,62		0,72	0,74	0,67
Hours worked per week	24,6	26,7	22,5	22,3	27,5	28,4	22,9
Hours worked per week , employed	36,8	36,9	36,4		38,1	37,9	34,1
Hourly wage	9,2	7,2	6,7	8,2	6,6	11,3	10,3
Labour income	11608	10464	7726	9920	8374	15420	11478
Non- labour income	4721	5312	3368	4864	2698	1646	7231
<i>Sample size</i>	566	585	379	442	284	121	557
Male							
Age	40,6	40,2	43,2	40,4	43,6	40,6	41,5
Number of children	0,09	0,07	0,07	0,08	0,03	0,12	0,06
Education low	0,56	0,10	0,43	0,32	0,51	0,26	0,32
Education medium	0,10	0,67	0,42	0,52	0,18	0,55	0,17
Education high	0,34	0,23	0,16	0,16	0,31	0,18	0,52
Employment rates	0,68	0,80	0,80		0,77	0,76	0,78
Hours worked per week	27,1	33,3	32,6	31,5	33,8	32,6	35,1
Hours worked per week, employed	39,7	41,5	40,9		44,0	42,5	45,0
Hourly wage	9,4	8,1	6,9	8,2	7,0	12,3	11,2
Labour income	13097	15074	11555	13023	10211	19754	19025
Non- labour income	4003	3118	2207	3586	1785	1250	3511
<i>Sample size</i>	368	459	240	306	190	148	365

Note: All income measures in EUR.

Source: ECHP wave 7, HUS 1996 and own calculation

Table A3a: Tobit with Selection, simulated life course, dependent variable hours of work, reference group: Young couple without children, Female. Marginal effects (upper panel), and decomposition of total marginal effect between impact on participation (α) and working time (1- α), (Lower panel).

Independent Variables	Females						
	France	Germany	Italy	The Netherlands	Spain	Sweden	UK
Young Single without children	4,05 ^b	-2,64	2,64	-3,52	8,20 ^b	-9,71 ^b	-9,61 ^a
Couples with young children (<7)	-2,73 ^b	-18,60 ^a	-7,97 ^a	-17,44 ^a	-8,30 ^a	-9,23 ^a	-19,05 ^a
Couples with children (7-12)	1,48	-15,90 ^a	-5,96 ^a	-18,77 ^a	-8,22 ^a	-4,26	-14,71 ^a
Couples with children (13-18)	0,81	-12,52 ^a	-5,42 ^a	-17,99 ^a	-7,22 ^a	2,06	-7,23 ^a
Midlife couple without children "Empty nest"	-2,66 ^b	-14,08 ^a	-5,56 ^a	-19,79 ^a	-7,99 ^a	3,67	-11,28 ^a
Older retiring couples without resident Children	-25,57 ^b	-37,05 ^a	-18,30 ^a	-38,62 ^a	-23,25 ^a	-13,90 ^a	-35,12 ^a
Education low	-2,02 ^c	-4,54 ^a	-8,48 ^a	-2,43 ^a	-5,03 ^a	-3,24 ^c	-4,36 ^a
Education high	4,86 ^a	8,03 ^a	5,33 ^a	8,30 ^a	6,40 ^a	9,25 ^a	1,87 ^c
Non labour Income	-2,07 ^a	-1,26 ^a	-1,49 ^a	-1,44 ^a	-0,32 ^a	-1,81 ^a	-0,22
Metropolitan area yes=1. 0=no)	1,49	-	-	-	-	1,92	-
East Germany	-	6,36 ^a	-	-	-	-	-
South (Italy, Spain or UK)	-	-	-7,87 ^a	-	-5,99 ^a	-	0,60

Independent Variables	Females (α)						
	France	Germany	Italy	The Netherlands	Spain	Sweden	UK
Young Single without children	0,76	ns	ns	ns	0,90	0,55	0,89
Couples with young children (<7)	0,95	0,65	0,85	0,54	0,93	0,38	0,59
Couples with children (7-12)	ns	0,53	0,81	0,55	0,88	ns	0,48
Couples with children (13-18)	ns	0,65	0,75	0,58	0,94	ns	0,32
Midlife couple without children "Empty nest"	0,98	0,75	0,86	0,66	0,97	ns	0,58
Older retiring couples without resident Children	0,90	0,78	0,94	0,70	0,99	0,57	0,66
Education low	0,75	0,98	1,00	0,75	1,00	0,23	0,69
Education high	1,00	0,75	1,00	0,70	0,99	0,68	0,53
Non labour Income/1000	0,89	0,85	0,90	0,79	0,97	0,77	ns
Metropolitan area yes=1. 0=no)	0,79	-	-	-	-	0,41	-
East Germany	-	0,39	-	-	-	-	-
South (Italy, Spain or UK)	-	-	0,95	-	0,86	-	ns

Note: **Upper Panel:** Marginal effects are evaluated at sample means. a indicates significance at 1% level, b at 5 % level and c at 10 % level. All income variables in Euro.

Lower Panel: Decomposition of total Marginal effects evaluated at sample means. A coefficient (α) equals to 1 means that the whole effect is on participation, a value equals to 0 means that the whole effect is on working time. Only significant parameters are reported.

Source: ECHP wave 7, HUS 1998 and own calculations

Table A3b: Tobit with Selection, simulated life course, dependent variable hours of work, reference group: Young couple without children, Male. Marginal effects (upper panel), and decomposition of total marginal effect (lower panel) between impact on participation (α) and working time ($1-\alpha$).

Independent Variables	Males						
	France	Germany	Italy	The Netherlands	Spain	Sweden	UK
Young Single without children	-5,24 ^b	-7,47 ^a	-6,87 ^b	-5,90 ^b	-4,23	0,27	-16,28 ^a
Couples with young children (<7)	13,39 ^a	2,42	4,33 ^b	2,68	4,12	9,28 ^a	-2,75
Couples with children (7-12)	13,91 ^a	3,66	3,07	0,98	8,45 ^a	17,89 ^a	-2,73
Couples with children (13-18)	14,69 ^a	4,73 ^a	2,63	5,03 ^b	5,18 ^b	12,74 ^a	-5,06
Midlife couple without children "Empty nest"	6,54 ^a	-2,05	-1,33	-5,78 ^a	1,46	10,98 ^a	-7,34 ^b
Older retiring couples without resident Children	-25,07 ^a	-20,98 ^a	-15,82 ^a	-23,93 ^a	-17,52 ^a	-8,55 ^a	-31,12 ^a
Education low	3,29	-6,84 ^a	-4,26 ^a	-2,81 ^b	-3,39 ^b	-6,35 ^a	-0,45
Education high	7,71 ^a	10,21 ^a	5,18 ^b	9,80 ^a	6,21 ^b	1,53	4,02 ^b
Non labour Income	-1,88 ^a	-1,74 ^a	-2,38 ^a	-1,48 ^a	-4,97 ^a	-0,80 ^a	-0,86 ^a
Metropolitan area yes=1. 0=no)	-0,31	-	-	-	-	0,85	-
East Germany	-	-6,52 ^a	-	-	-	-	-
South (Italy or Spain or UK)	-	-	-7,22 ^a	-	-4,28 ^a	-	5,71

Independent Variables	Males (α)						
	France	Germany	Italy	The Netherlands	Spain	Sweden	UK
Young Single without children	0,99	0,58	0,90	0,70	ns	ns	0,99
Couples with young children (<7)	0,93	ns	1,00	0,82	0,93	0,99	ns
Couples with children (7-12)	0,87	0,89	ns	0,44	0,92	0,93	ns
Couples with children (13-18)	0,86	0,77	ns	0,67	0,71	0,91	1,00
Midlife couple without children "Empty nest"	0,79	ns	ns	0,95	ns	0,85	1,00
Older retiring couples without resident Children	1,00	0,75	0,80	0,84	1,00	0,63	0,81
Education low	ns	0,95	ns	1,12	1,00	0,72	ns
Education high	0,87	0,86	1,00	0,95	1,00	ns	0,90
Non labour Income/1000	0,97	0,85	0,97	0,55	0,95	0,64	0,83
Metropolitan area yes=1. 0=no)	ns	-	-	-	-	ns	-
East Germany	-	1,0	-	-	-	-	-
South (Italy or Spain or UK)	-	-	0,79	-	0,89	-	ns

Note: **Upper Panel:** Marginal effects are evaluated at sample means. a indicates significance at 1% level, b at 5 % level and c at 10 % level. All income variables in Euro.

Lower Panel: Decomposition of total Marginal effects evaluated at sample means. A coefficient (α) equals to 1 means that the whole effect is on participation, a value equals to 0 means that the whole effect is on working time. Only significant parameters are reported.

Source: ECHP wave 7, HUS 1998 and own calculations.