Women's Work and Family Profiles over the Lifecourse and their Subsequent Health Outcomes. Evidence for Europe

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Contribution to the Project

The aim of this research paper is to contribute to a better understanding of the challenges faced by European countries in the quest to adapt their social protection systems and labour market institutions to long-term economic, demographic and social change.

Women's Work and Family Profiles over the Lifecourse and their Subsequent Health Outcomes. Evidence for Europe[*]

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Abstract

The reconciliation of family and work is one of the "new social risks" contemporary welfare states are challenged to address. This paper contributes to a better understanding of the roles of work and family in women's life trajectories, shedding light on determinants and welfare outcomes of different combinations of motherhood and employment. We identify and compare distinctive life-course employment profiles of mothers across 13 European countries. After analyzing selection patterns, we investigate the possible link that exists between these work-family profiles up to the age of 50 and subsequent health outcomes. We embed our empirical investigation in a comparative welfare state framework and differentiate between four geographical areas that can be associated with different types of European welfare state regimes.

Keywords: welfare state, gender, family and work, health
JEL classification: I1, J2

1 Introduction

The strong increase in female labour force participation, fuelled by a big leap in women's educational attainment, is the most important trend in labour markets of the 20th century (Goldin, 2006) and one salient trait of post-industrialization. It reflects on the one hand an expansion of women's opportunities to pursue their individual self-fulfillment, to choose between different combinations of family and career involvement and to achieve economic independence. On the other hand, this momentous shift has created new tensions and needs, and difficulties with reconciling family and work can be identified as one of the "new social risks" contemporary welfare states are challenged to address (Bonoli, 2007).

Since the increase in female employment has neither resulted in an equal gender division of unpaid work nor an equivalent externalization of household activities to public or private service providers, it is primarily women who are exposed to the risk of experiencing some sort of work-family conflict. A rapidly increasing body of literature is scrutinizing the opportunities and constraints associated with the multiple exigencies of family and working life as well as the outcomes that result from different individual strategies and policy settings (see, e.g., Misra et al., 2011; Del Boca et al., 2009; Janus, 2012).

We contribute to a better understanding of the roles of work and family in women's life trajectories, by shedding light on both determinants and welfare outcomes of different combinations of motherhood and employment. More specifically, we identify and compare distinctive life-course employment profiles of European mothers across welfare state groups. After analyzing selection into these employment patterns, we examine a possible link between women's work-family profiles up to the age of 50 and their health outcomes later in life.

Previous studies provide evidence that stable employment is generally associated with superior health outcomes. Intuitively, this finding seems plausible as stable and steady employment is conducive to achieve economic secu-

rity and is demonstrably one of the most effective protective factors against poverty. At the same time, however, high workloads, poor working conditions and difficulties with the reconciliation of dual roles may have detrimental effects on health and well-being. Moreover outcomes may differ by country and country group as work and family choices as well as health outcomes are shaped by different institutional settings.

We construct a comprehensive health index to assess the relationship between mothers' life-course employment profiles up to the age of 50 and their health outcomes at later stages in life. Within this analysis, we draw attention to the role played by the gender distribution of work and care within the household as well as to the way in which socio-economic background, early childhood conditions and the situation in early adulthood shape choice and pursuit of different employment profiles. In contrast to earlier studies that investigate the relationship between work pathways and health for single countries (f.i. Frech and Damaske, 2012), we embed our empirical investigation in the framework of comparative welfare state analysis and differentiate between four geographical areas that can be associated with different types of European welfare state regimes. For this purpose, we use data from the first three waves of the Survey of Health, Ageing and Retirement in Europe (SHARE) – a cross-country longitudinal survey with the main aim to understand patterns of ageing across Europe. This dataset provides information spanning the whole lifetime of a representative sample of persons aged 50 and above in 13 European countries.

Clearly, the choice of employment patterns is not random. We find that women with favourable initial conditions, such as good childhood health, high cognitive skills and advantageous socio-economic conditions of parental home, are more likely to reconcile care for their children with continuous employment over the life-course. Those who combine motherhood with stable employment tend to be endowed with above-average health status. Working only marginally or with interruptions is associated with less favourable health outcomes. On the contrary, the observed statistical difference in health status between homecentred and full-career mothers disappears once we control for

differences in age, education and income. Southern Europe is an exception in this respect, where health does not vary significantly by the work-family profile. Our general finding holds, when we apply a multinomial treatment model to control for selection into careerpath on both observable and unobservable characteristics.

2 Literature review

2.1 Work, multiple roles, and health

Women have long reported worse self-related health than men. However, women's health is found to have improved in the past decades and the gender gap has narrowed over the last two decades. Rising educational attainment and labour force participation may have contributed to this upward trend. Even if such benefits may be increasingly threatened by a variety of other important changes such as growing difficulties with balancing family and work, some evidence suggests that the increase in education and employment might even result in a reversed gender gap in self-related health in the near future (Schnittker, 2007).

Earlier research finds that women and also mothers with steady employment careers are healthier than their peers who do not work or are employed intermittently. For example, Frech and Damaske (2012) find for US mothers that full-time, continuous employment following a first birth is associated with significantly better physical and mental health at age 40 than part-time work, paid work repeatedly interrupted by unemployment, and staying at home without engaging in paid work. Part-time workers with little unemployment report significantly better health at age 40 than mothers experiencing persistent unemployment. These relationships remain after adjusting for pre-pregnany and at-birth characteristics and accounting for other selection. The authors find proof of the hypothesis that mothers more advantaged prior to pregnancy in terms of education and work experience as well as cognitive abilities select into full-time, continuous employment, whereas those from

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disadvantaged backgrounds, young mothers or black and Hispanic ones, are more likely to follow interrupted working careers or staying at home. These selection results are interpreted as evidence that early life-course disadvantages accumulate over time, as the more disadvantaged women are less likely to experience the work pathways associated with the greatest health benefits at age 40. Results obtained by Tubeuf et al. (2012) for Britain seem to support this claim: Early-life conditions are found to be important predictors of adult health, accounting for almost 20% of explained health inequality. Noticeably, the absence of a father at the time of birth and experience of financial hardships represent the lead factors for direct effects on health. Thus, there is evidence of a cumulation of disadvantage. However, taking other studies – such as Elman and Orand (2004), Ferraro and Kelley-Moore (2003), Hamil-Luker and O'rand (2007), Hayward and Gorman (2004) and O'rand and Hamil-Luker (2005) – into account, there is not yet a consensus regarding the extent to which the experience of early disadvantage influences later health outcomes.

Theory and empirical evidence indicate that paid work is generally beneficial for physical and mental health, and that employed persons enjoy better health relative to the non-employed or underemployed. Studies by Pavalko and Smith (1999) and Ross and Mirowsky (1995) show that the positive relationship between paid work and health persists across race, marital status, and life course stage and is strongest among full-time working women, who report a lower increase in physical limitations relative to their unemployed or intermittently employed peers. In a meta-study, Klumb and Lampert (2004) do not find consistent results across different health outcomes such as psychological distress, subjective health, cardiovascular risks and disease, and mortality. They do however conclude that "methodologically sound longitudinal studies confirm the findings of cross-sectional research showing that employment has either beneficial or neutral effects on women's health" (p. 1016).

Several investigations provide evidence that situations in which the combination of work and care activities results in work overload and work-family

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conflict represent negative health determinants. For instance, Muffels and Kemperman (2011) find that women gain in well-being when combining work and care, but only up to a particular limit or ceiling in terms of hours spent after which subjective well-being declines strongly due to the time pressure they face. In line with this finding, Roxburgh (2011) provides evidence for a significantly positive association between parental time strains and depression that is largely explained by job demands. Well-off parents are, however, significantly less depressed by parental time strains than less affluent parents. Moreover, it seems that negative outcomes resulting from work-family conflict are not necessarily confined to women.

The influence of mothers' employment on their health may depend on the gender division of labour within the household. Economic theory argues that specialization enhances mental health and wellbeing, whereas other, more psychological theories argue that equity matters most. Kalmijn and Monden (2012) combine information on the time spent on household and paid labour in order to study the effect of the division of labour within households on husbands and wives depressive symptoms, thereby considering separate and partly independent measures of equity and specialization. They find clear evidence for the equity hypothesis: When hours spent on paid and household labour are more equally distributed between husband and wife, both report fewer depressive symptoms. The authors find only weak and inconsistent support for a positive effect of specialization.

2.2 Work-family models in a comparative welfare state perspective

Despite a general increase in Europe, labour force participation of women and particularly mothers varies markedly across countries. Possible reasons for these differences are manifold, since labour market behavior is influenced by a host of factors that include individual and household-related characteristics, economic and labour market conditions as well as cultural values, traditions and norms such as the prevailing notions of gender roles. Moreover, empirical

studies attribute a significant explanatory power to the design of welfare state policies that shape women's engagement in employment and child care as well as the gender distribution of unpaid work.[1]

Children in need of care are found to hardly influence the work career of men, but normally have a significant negative effect on both the probability of labour force participation of women and their working hours. The lower the age and the higher the number of children in a household, the higher is the probability of women being non-employed and the lower are their actual working hours in a job.[2] As shown in the literature, this impact of motherhood is mitigated by social policy measures that facilitate the combination of family and work. The most important policy areas in this respect concern childcare facilities, parental leave, working-time regulations and other flexible work arrangements as well as gender equality.[3] The extent of women's labour market participation is influenced also by other institutional features, such as the design of the tax system and the organisation of old age care. It is the particular mix of these institutional arrangements that influences mothers' (and women's) employment over the lifecourse.[4]

In our analysis we examine a possible heterogeneity in the relationship between women's work-family profiles and subsequent health across welfare state types. The classical distinction in welfare state regimes goes back to the seminal work by Esping-Andersen (1990) and was later expanded to incorporate the principle of de-familization, i.e. the extent to which welfare states weaken individuals' reliance on the family and facilitate their economic independence (Esping-Andersen, 1999, 2002).[5] In both cases, European countries

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[1]Cf. Berninger (2009), Cipollone and D'ippoliti (2011), Del Boca et al. (2009), Stadelmann-Steffen (2008), Steiber and Haas (2009) and Misra et al. (2011).

[2]See, e.g., Uunk et al. (2005) for 13 EU countries, Del Boca et al. (2009) for 15 European countries, Steiber and Haas (2009) for 26 industrialised countries.

[3]See, e.g., Del Boca and Locatelli (2007), Jaumotte (2003), Del Boca et al. (2008), Stadelmann-Steffen (2008).

[4]In general, a neutral, individual taxation regime, leave schemes with job protection, a high wage replacement level, sufficient but moderate length and incentives for fathers to take up leave (or individual-based rights to leave) as well as a demand-meeting supply of good-quality childcare are found in the literature to be essential ingredients of a policy supportive of women's employment (cf. Bock-Schappelwein et al., 2009).

[5]The original regime-typology was based upon the principles of de-commodification,

are sorted into three groups: a "Social democratic regime" (Nordic countries), a "Conservative regime" (Continental European countries), and a "Liberal welfare regime" (Anglo-Saxon Countries). Following the work of Leibfried (2000), Ferrera (1996) and others, it has meanwhile become standard practice to add a separate "Mediterranean" type (Southern European countries) to this three-fold typology and to include Eastern European countries in the analysis.

More recent cross-country studies show that welfare states can be clustered into distinct groups according to the way work-family policies shape men's and women's commitment in paid work and care.[6] It is however important to note that these classifications reflect the current or recent situation and are not necessarily accurate with respect to earlier periods of time. The youngest women in our SHARE sample were born in 1957 (see section 3.2) and our analytical sample consists of respondents who completed their education between the early 1950s and mid-1970s and started their first work experience immediately or shortly afterwards. Only very few of the policies that we currently associate with work-family balance were already in place in those years. Even in the Scandinavian countries, which in many ways played a pioneering role, support to parents of young children started to be developed mainly from the late 1960s onwards. According to Bonoli (2007), the reorientation of the Nordic welfare states in function of the conciliation of employment and family life began in the 1970s and did not precede, but rather follow the expansion of female employment.[7] Until the late 1960s and early 1970s, the life of working mothers in Nordic countries was still dominated by "juggling and by reliance on informal care" (Bonoli, 2007, p. 505).[8]

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social stratification and the public-private mix. Esping-Andersen (1999) added the dimension of de-familization after being criticised for neglecting the gender-dimension and especially the role of women as providers of unpaid care work.

[6]See, e.g., Bambra (2004), Sainsbury (1999), Leitner (2003), Bettio and Plantenga (2004), Gornick and Meyers (2004), Guo and Gilbert (2007) and Thevenon (2011).

[7]In Sweden, for instance, the decision of a massive expansion of childcare facilities, with the aim to provide public child care for all pre-school children, was taken in the mid-1970s. At the beginning of the 1970s there were only 80,000 childcare places available, far less than the demand. Between 1970 and 1980 the supply of childcare places grew by some 250 percent, from 80,000 to 406,000 (Naumann, 2005).

[8]Although, at least in Sweden, some elements of policies to combine family and em-

For the purposes of our research, we have to take into account this historical dimension. As we can see from Table 9 in the Appendix (restricted to countries that are part of our SHARE sample), female labour force participation rates in Europe differed markedly in the 1960s and early 1970s and – even more importantly – they experienced different growth rates in subsequent years. These differences in level and growth rate can not be explained solely by differences in work-family policies, but have to be related to a broader socio-economic and institutional context. Taking Esping-Andersen's original classification as a reference and focusing particularly on the 1960s and 1970s, we therefore distinguish between the following country groups, associated to different welfare state regimes:[9]

(1) In the Nordic countries (Sweden, Denmark), female participation rates began to rise considerably in the 1960s and attained very high levels by the early 1980s. A mix of financial allowances, leave facilities and an extensive public provision of day care encouraged a work-family household setting close to the 'dual-earner/dual-carer'-model (Crompton, 1999). The large increase in public services directed to child care (besides extensive services related to care for the elderly and the disabled) implied that women were able to leave the home and enter the labour market, often employed in the public sector in care jobs but now for a salary instead of doing unpaid housework.

(2) In Continental Europe, female labour force participation stagnated at a low to intermediate level throughout the 1960s and 1970s. The expansion of female employment started much later than in Scandinavia. The main responsibility for the care of young children was (and partly still is) relegated to the family. With the notable exception of France, levels of public expenditure on care services were very low compared to the Nordic countries. Families were supported primarily in the form of (unconditional) financial transfers and work-family policies conducive to a modified version of the 'male breadwinner-model', in which men are working full-time and women adapt their work efforts to family needs by withdrawing from the labour

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ployment date back to the 1950s and 1960s (see Sundstrom and Stafford, 1992).

[9]We omit the Anglo-Saxon countries typically subsumed under the Liberal welfare state regime, because our data do not include any of those countries.

market or switching to part-time work ('dual-earner/female part-time carer model', Crompton (1999)).

(3) Women's labour force participation in Southern Europe (Spain, Italy, Greece, Portugal) was and still is markedly lower than in other parts of the continent. By the early 1980s, participation rates in these countries were at least 10 percentage points below those in Continental Europe and at least 20 percentage points below those in Northern Europe. The dominant gender ideology was that of a 'male breadwinner and a female carer': Women were not encouraged to engage in paid work, but to care for their children at home without support by the state. Legislation to support female employment and work-family flexibility (such as the right to part-time work) did not develop or developed only slowly. Particularly in those countries that returned to democracy only in the 1970s, gender equality legislation was very fragmentary.

(4) Under communist rule, Eastern Europe was characterised by a gender regime that – on the surface – had strong resemblances with the Scandinavian one, while at the same time traditional gender roles dominated in the private sphere (Pascall and Lewis, 2004). High female employment rates were a rule and differences between countries before the fall of communism seemed to be smaller than they were in the West during that period Van der Lippe and Van Dijk (2002).[10] Having the combination of strong female labour market participation, legal equalities and persistent gender inequality within households in common, the countries belonging to the former Communist block can be regarded as a distinct welfare state typology.

In spite of the usefulness and heuristic relevance of this classification, it would be wrong to lose sight of the differences that existed and still exist between countries associated with the same welfare state regime. In this respect, the cluster of Continental countries is the largest and also most heterogeneous one. France, for instance, developed its family policies following a different path than Germany or Austria, particularly with respect to out-

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[10]At the point of transition, women's labour market participation rates in CEE were very high, between 70 and 80% depending on the country.

of-family childcare institutions. Also the Netherlands, which had very low levels of female employment until the 1980s, can be singled out from the other countries in this group. Differences with respect to female employment levels and the development of work-family policies can be found also in the other clusters, for instance by comparing Poland with other Eastern European countries or by opposing Italy to Greece. We will discuss some of these national specifities in the subsequent sections.

3 Empirical research design

3.1 Research questions and empirical strategy

In this work, we investigate the relationship between women's work-family profiles over the lifecourse and their subsequent health outcomes Our analysis involves three steps:

(1) First, we identify different work-family profiles and describe their distribution as well as the characteristics of women associated with them. We focus on women with children and distinguish between mothers with hardly any paid work experience (homecentred mothers), mothers with limited work experience (mothers with marginal employment), mothers who crafted their work careers around their family obligations (mothers with intermittent careers) and mothers who pursued parallely family and career (full-career mothers). Using longitudinal information on the lifetime careers of women in 13 European countries, we construct indicators for the number of years in paid employment until the age of 50 as well as for the number of years with both work and care responsibilities, identified through the presence of young children (below the age of 10) in the household.

(2) In a second step, we investigate the selection of women with children into different work-family profiles, conditional on circumstances in childhood ('initial conditions') and on the situation at time of first childbirth ('childbirth situation'). The first set of circumstances comprises indicators for the socio-economic status (SES) of parents, for living conditions, childhood health,

and cognitive abilities. To control for unobserved factors related to the time and place in which respondents grew up, we include country- and cohort-dummies in our analysis. The second set of circumstances refers to the time when women made their first choices with respect to education, labour market participation, partnership and child-bearing. It includes information on the educational level attained by respondents, the age at birth of the first child, as well as the labour market situation and the partnership situation at that moment in time. We employ multinomial logit models using the work-family profiles as dependent variable, and sequentially include information on initial conditions and childbirth situation as explanatory variables in our estimations to shed light on the mechanisms that influence the later lifecourse of women.

(3) The final and most important step is to test whether women who choose different combinations of work and family committment display systematic differences in health outcomes at later stages in life. We start with a multivariate regression analysis to show whether observed differences in health status between women with different work-family profiles persist after accounting for compositional effects, such as differences in education and income level. Specific attention is thereby given to indicators for the intensity of dual committment to family and paid employment.

An identification of the effect of different work-family-combinations on health is complicated by the potential correlation between the choice of a specific work-family profile and the outcome of interest. We account for the endogenous selection of women with different characteristics into work-family profiles, by employing an econometric model that jointly estimates two components: a reduced-form profile choice equation and an outcome equation with endogenous profile categories.[11] Following Frech and Damaske (2012) we estimate this joint model to adjust for the non-random selection

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[11]This multinomial treatment model and the corresponding STATA routine have been developed by Deb and Trivedi (2006) and Deb and Trivedi (2006b). Examples for its utilisation can be found in Shane and Trivedi (2012) and Frech and Damaske (2012). This last study is of particular interest, because the authors use this approach to investigate the relationship between mothers' work pathways and health.

of women into work-family profiles based on observed 'initial conditions' and 'childbirth situation'. The second stage equation evaluates the relationship between work-family profiles and health, adjusting for the unequal selection into profiles. The model allows for correlated unobserved heterogeneity between its two components.[12] The model specification is provided in the Appendix (section A.1). Further information on the estimation procedure can be found in Deb and Trivedi (2006) and Deb and Trivedi (2006b).

3.2   Data sources and sample characteristics

We combine data from the first three waves of the Survey of Health, Ageing and Retirement in Europe (SHARE) for the empirical analysis.[13] SHARE is a multidisciplinary and cross-national panel database of micro-data on health, socio-economic status and social and family relationships of individuals aged 50 or over.[14] Eleven countries contributed to the 2004/5 SHARE baseline study. Three more European countries joined the survey in the second wave (2006/7). SHARELIFE, the third wave of the project, was conducted in 2008-09 over the same population who took part in the two previous waves. This time, the respondents were interviewed about their life history. Different fields such as childhood health, education, job career, family life, housing, etc. were surveyed. The data include information on initial conditions and lifecourse. For their collection, a life grid or calendar was utilised to help respondents recall major events of their work and family life.[15]

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[12]This unobserved selection is handled by introducing latent factors. The values for these latent factors are drawn using simulation and the model is estimated using maximum simulated likelihood methods (Shane and Trivedi, 2012).

[13]We use data from the release 2.5 for waves 1 and 2 of SHARE, and release 1.0 for SHARELIFE.

[14]For more details on SHARE see the "First Results Books" by Börsch-Supan et al. (2005) and Börsch-Supan et al. (2008), as well as the "Methodology Books" by Börsch-Supan and Jürges (2005) and by Schröder (2011).

[15]This type of data may be problematic especially if the period of recall spans decades (e.g. Bound, Brown and Mathiowetz, 2001). Studies by Smith (2009) and Haas and Bishop (2010) have validated retrospective data from other studies, the Health and Retirement Survey (HRS), the Panel Study of Income Dynamics (PSID) and the Wisconsin Longitudinal Study (WLS), with objective records for data. Their results are encouraging and point to the general validity of this data generation process. Ex post analysis checking

The longitudinal dataset comprises 25,678 individuals from 13 European countries surveyed in SHARELIFE at least once in waves 1 and 2 respondents, 14,391 (56%) of them are women. As a general rule, the target population of individuals surveyed by SHARE is aged at least 50. A small part of the sample consists, however, of younger individuals, because partners of the target population were interviewed as well, irrespective of their age. Since we are interested in the lifecourse of women who have already reached mature age, we eliminate observations from respondents who were younger than 50 when surveyed by SHARELIFE. This leaves us with 14,030 observations.

As SHARE was designed to provide information representative of the European population aged 50 and above, this full sample is useful to investigate the work-family profiles of European women and their evolution over time. The drawback is that it spans a large number of cohorts, comprising women who reached adulthood before or during World War II. To create a more homogenous sample that is conducive to explore the lifecourses of Europeans in the post-war period, we additionally define a restricted sample of younger women, aged between 50 and 65 years (working age) when first surveyed by SHARE, in wave 1 or 2. This sub-sample consists of 8,089 women (comprising cohorts born between 1938 and 1957) and is our preferred analytical sample, particularly for the multivariate analysis.

The present work focuses on Europe and aims to shed light on differences across welfare state types, that differ with respect to the institutions and policies that affect female fertility and labour market participation decisions. We group the countries present in the SHARE data in clusters linked to welfare characteristics discussed in section 2.2 and loosely associated with the typology of Esping-Andersen. Our data do not contain countries associated with the Anglo-Saxon welfare regime, which leaves us with four broad geographical areas: Nordic Europe (Sweden, Denmark), Continental Europe (West Germany, the Netherlands, Belgium, France, Switzerland, Austria), Southern Europe (Italy, Spain, Greece) and Eastern Europe (Poland, Czech

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for internal consistency of SHARELIFE data, as well as comparisons of recall information with external cross-country historical information confirm the high data quality provided by SHARELIFE (Mazzonna and Havari, 2011; Lyberaki et al., 2013).

Republic, East Germany).[16]

Table 8 in the Appendix shows how respondents in the working-age sample are distributed by country and welfare groups, as well as descriptives for selected variables. These descriptives reveal some substantial heterogeneity within country groups. This applies particularly to the Eastern and Continental country groups. Women in the Netherlands, for instance, have worked on average three years less than their counterparts in Belgium, France and West Germany.[17] French women are characterised by a comparatively high fertility rate, whereas in both Switzerland and the Netherlands we observe a part-time share and a number of job changes that are substantially higher than in the other Continental countries. These differences reflect underlying differences in the extent but also in the modality of combining family and employment in these countries. We can find large differences also between Poland, where women have much shorter worker careers and higher fertility rates, and the other Eastern European countries. Variation is however more substantial between groups than within groups.

3.3 Variables of interest

Categorisation of work-family profiles: To reduce the complexity represented by heterogeneous biographies, we draw a first distinction between mothers and childless women. The more important and also more difficult exercise is however to distinguish analytically between mothers with different types of work-family profiles. We employ a methodology that combines two approaches that are present in the literature. Lyberaki et al. (2013) employ a classification proposed by Hakim (2000), with a distinction between "home-centred women", i.e. those for whom family and children are the main

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[16]The SHARE sample contains information on the part of Germany in which respondents lived before 1989. Given that the career of East German older women was affected by GDR institutions, for the purpose of examining family and employment patterns it makes sense to include Eastern Germany with the Czech Republic and Poland (Lyberaki et al., 2013).

[17]For a long time, the Netherlands used to have a low level of female employment, only in more recent decades the number of working women increased at a faster rate than in most other Western countries (Van der Lippe and Van Dijk, 2002).

priorities throughout life; "work-centred women", who are either childless or mothers who have continued to work and to give much space to paid employment in their lifetime careers; and "adaptive women", a diverse group composed of women who combine work and family relying heavily on maternal leave periods and part-time employment. As key indicator, the authors use the years of work of each respondent until she reached the age of 50 - regardless of current age.[18] Second, we draw on an approach chosen by Frech and Damaske (2012), with a stronger focus on the career choices made by women in presence of children. The authors restrict their analysis to mothers only and classify women's work pathways into "working", "intermittently working", or "not working".

In our analysis, we combine elements from both the abovementioned approaches. First, we divide women in groups with different intensity of labour market participation using the sum of years spent in paid employment until the age of 50. This way, we differentiate between mothers who did not work, those who worked for some years and those who worked throughout most of their adulthood. As a second indicator we use the number of years with dual committment in paid employment and child care as a share of all years with young children in the household. Based on the two measures, visual data inspection and sensitivity analysis, we distinguish the following categories of women:

- home-centred mothers who have been active on the labour market for one year or less;

- mothers with marginal employment biographies, who have been in paid employment for at least two but no more than 19 years;

- mothers with at least 20 years of work experience, but (longer) spells of economic inactivity during times in which their children were young (intermittent employment);

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[18]Using this indicator, the authors distinguish work-centred women (with more than 30 years' work), family-centred women (with no links to the labour market), and two types of adaptive career women (those who have between 1 and 19 years and those who have between 20 and 29 years of work experience).

- and full-career mothers, with at least 20 years of work experience and a high share of dual committment in work and care (defined as working at least 90% of the time when one or more children in the household were aged below 10 years).

Health outcome(s): SHARE contains rich information on respondents' health status and provides a broad range of health measures, including self-rated health status (SRH), self-reported diagnosed chronic conditions, functional limitations, mental health as measured by two alternative depression scales (CES-D and Euro-D) as well as physical measurements (hand grip strength and walking speed). General self-rated health (SRH), which is usually measured on a five-points scale, is probably the most widely used health indicator in studies that are based on survey data. In fact, SRH has proven to be a good measure of an individual's health and a powerful predictor of individual mortality (see for instance Idler and Benyamini (1997)). At the same time, there has been growing concern that the comparability of self-reported measures across population groups and countries might be problematic because of group-specific differences in health self-assessment and country-specific differences in reporting. This is the case because respondents might have different reference levels of health in mind when they assess their own status and because response categories might have different connotations across countries and cultures.[19]

To overcome these limitations, we choose as our main health measure a computed health index that can be interpreted as a proxy for "true health". This "true health" index, scaled between 0 (near dead) and 100 (perfect health) has been designed following a methodology proposed by Juerges (2007). It accounts for a large number of (diagnosed) physical and mental conditions as well as measurements such as grip strength and the body-mass index. The index is computed using generalised ordered probit models and

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[19]For a discussion of this issue see Juerges (2007). For instance, older respondents tend to have a "milder" view of their health, i.e. they tend to rate their health as better than otherwise comparable younger respondents (van Doorslaer and Gerdtham, 2003; Juerges, 2007). Dowd and Zajacova (2007) find evidence for differences in the relationship between SRH and objective health-risks across groups with different SES.

it accounts for country-specific differences in reporting style. Further details on the computation are presented in the Appendix, section A.2.

In the context of our research, the health index has the specific advantage to overcome the potential differences in reporting style of SRH across countries. It therefore represents our main health outcome variable. To add further insights and to check the robustness of our results, in most of our analyses we use additional health indicators, measured at different points in time (i.e. SHARE waves), namely SRH (expressed as binary variable with value '1' for less than 'good' health) and an indicator for depressive symptoms based on the twelve items of the EURO-D scale.

Selection variables: For the selection equation of our multinomial treatment model we need variables that are expected to select women into work-family profiles, but have no direct association with health. Due to the pervasivity of health as both a determinant and an outcome of human behaviour, the demands on such selection variables are high. Ideally, we would want to observe exogenous factors that push otherwise very similar women randomly into different work-trajectories. Given the available information, we include as determinants of the work-family profile variables for age and partnership status at childbirth as well as a dummy variable for partner loss (due to divorce or death) when the first child was young. In addition, we include two "macro" indicators, the generosity of maternity leave benefits and the availability of the contraceptive pill at first childbirth, as explanatory variables.[20] These two indicators are exogenous to individual health and to respondents' choices, but they have the limitation of offering only a small amount of variation. In light of these limitations, our estimates of the effect of different work-family profiles on health outcomes have to be interpreted with some caution.

Covariates: In our analysis, we include personal characteristics such as age, years of education and marital status. With respect to employment, we use information on the number of unemployment spells (of at least six

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[20]These variables have been used by Brugiavini et al. (2013) to investigate the impact of maternity benefits on leave taking. We would like to thank the authors and particularly Elisabetta Trevisan for making these data available to us.

months), the number of jobs held by the respondents and on the distinction between part-time and full-time employment. The set of initial conditions includes an indicator for parental cultural capital and SES (the number of books in the household)[21] and two indicators for the housing quality – the number of persons per room and an index constructed as sum score of five accomodation amenities such as living in a house with central heating, running water etc. – which can also be interpreted as proxies for SES. Furthermore, it contains a dummy indicator for cognitive ability (coded to '1' if the respondent stated to be better or much better at school than other children in language, maths or both) and a dummy variable set to '1' if the respondent did not grow up with both biological parents. All this information was asked with reference to the time when the respondent was 10 years old.[22] With respect to early adulthood and the moment when women started a family, we construct indicators of the age at (first) childbirth, the number of work years before childbirth as well as a dummy set to '1' if the woman had no cohabiting partner when becoming a mother. Another dummy variable indicates whether a woman lost her partner (due to death or separation) before her first child turned 10 years old.

The individual work-family trajectory might have been influenced by health problems that have arisen in adulthood and were not related to initial conditions. For instance, women might have followed a intermittent or marginal employment career because health problems interrupted their work careers. SHARELIFE asked respondents to provide information on injuries that led to disability as well as on all illness episodes that lasted for more than one year. Those individuals who suffered from severe illness periods were additionally asked if the health problem led to significant consequences, such as limiting opportunities for paid work. We condense the information on injuries and illnesses into a dummy variable that takes the value '1' if the respondent had either an illness that led to limitations for paid work or a disability resulting

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[21]Although this variable is ordinal in scale, Brandt et al. (2012) have carried out a test for linearity and shown that it can enter regression analysis as continuous variable. The same is true of the housing quality index described next.

[22]Similar variables and indicators have been used in other studies based on SHARE, such as Deindl (2013) and Havari and Peracchi (2011).

from an injury, before she turned 50.

We are particularly interested in understanding if the extent of dual committment in work and childcare has long-term repercussions on women's health. SHARE respondents were asked whether they experienced periods of particular stress in their lives and, if so, to provide start and end year of these periods. We use this information to prove whether stress periods have a negative effect on health. Moreover, respondents were asked some questions about the household division of tasks with respect to household chores and childcare. We created a dummy indicator, that is coded '1' if the responding woman was mainly or solely responsible for both household and care, and '0' that her partner shared this tasks at least in equal measure. Unfortunately the relevant questions are not included in the main SHARE questionnaire, but are part of a drop-off section that was not completed by all respondents. Use of the indicator on household division of tasks therefore reduces sample size substantially.[23] Additional indicators that provide proxy information on the amount of paid and unpaid work carried out by women are the number of children and the share of part-time work on total employment years.

Figure 1 indicates that in Southern Europe there is a very strong presence of women who have never been in paid employment. In our weighted sample, which is representative of women aged 50 and above, we find that 30% of mothers have never been in paid employment. This is in stark contrast to the corresponding shares in the other country groups, where less than 7% (Eastern and Continental Europe) and 2% of women (Continental and Southern Europe) have never entered the labour market. Even if we restrict the sample to women who were part of the working age population when entering SHARE for the first time, the share of economically inactive women still totals 25% in Southern Europe (and at most 4% in the remaining country groups, see Figure 7 in the Appendix).

The defining trait of Continental European countries lies in the compara-

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[23]To check whether the response rate to this question was biased, we test for deviations between responses and missings in terms of age, educational level, income, and association with work-family profile. We do not find any systematic difference between those who completed the drop-off section and those who did not.

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tively high concentration of women with moderate levels of employment. The employment profiles of Nordic and Eastern European women, where mothers with long employment careers are the rule rather than the exception, display greater similarities. As we can see from Figure 2, similar differences emerge when we look at the share of time women spent in paid employment while having young children at home. Continental Europe displays a bi-modal pattern, with a comparatively high concentration of women with high and low degrees of dual work-family committment. In Eastern and Nordic Europe, the majority of mothers have been employed most of the time when their children were young. In Southern Europe, not surprisingly, the picture is exactly the opposite.

4   Results

4.1   Distribution and characteristics of work-family profiles

Our first battery of results gives an overview of the distribution of different work-family combinations across country groups and cohorts, and provides information on the characteristics of women associated with these profiles. The following two figures show how European women – grouped by welfare areas – allocated their time to paid employment up to the age of 50, and to what extent they continued to work in the presence of young children in the household.

Based on a classification in work-family profiles, Figures 3 and 4 present information on the distribution of our two central indicators for numbers of years worked and the share of years worked with young children in the household. By definition, home-centred women are those who have no work experience. Women with marginal employment have worked some years, in most cases not when their child or children were young. Both women with intermittent employment and those with steady employment have had at least 20 years of work experience before reaching age 50. As can be seen in

the figures, the distribution of years worked is skewed further to the right for women with steady employment. However, the main difference between the two groups comes to the fore when we look at the second indicator: By definition, full career mothers are those who have worked at least 90% of the time when their child or children were young. Mothers with intermittent employment shaped their career around familial committments, with longer breaks from paid employment in concomitance with child-rearing.

As we would expect, there is a high correlation between welfare areas and particular work-family profiles. Table 1 presents this information in a disaggregation by number of children.[24] The distribution of work-family profiles varies greatly by area and is fairly consistent across families of different size. Not surprisingly, the share of women with long careers in paid employment decreases with the number of children in all country groups. Changes in the profile distribution according to the number of children vary however between welfare areas. In Southern and Continental Europe, women with more than two children were much more likely to stay at home and less likely to be continuously employed than those with only one or two children. Even in Eastern Europe, the share of home-centred women increases substantially with the number of children.

By contrast in the Scandinavian countries it is very uncommon to find women who did never participate in the labour market, even when they had more than three children. In Nordic Europe, the most substantial shift across profiles that occurs as the number of children increases, is that between women with intermittent and those with marginal employment. The share of full-career mothers decreases with family size, but significantly less than in the other European areas.[25]

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[24]In our sample only 17% of mothers have more than 3 children, the number drops to 13% if we look only at the sub-sample of younger women.

[25]It is interesting to note that – compared to differences in the extent of female labour force participation and of work-family committment – differences in fertility patterns across country groups are less pronounced. The major difference lies in the share of women with four and more children, which is significantly lower in Northern Europe than in the other regions. The share of childless women is highest in Southern Europe, followed by Continental Europe, and lowest in Eastern and Nordic Europe.

Figure 1: Distribution of years worked, by welfare area
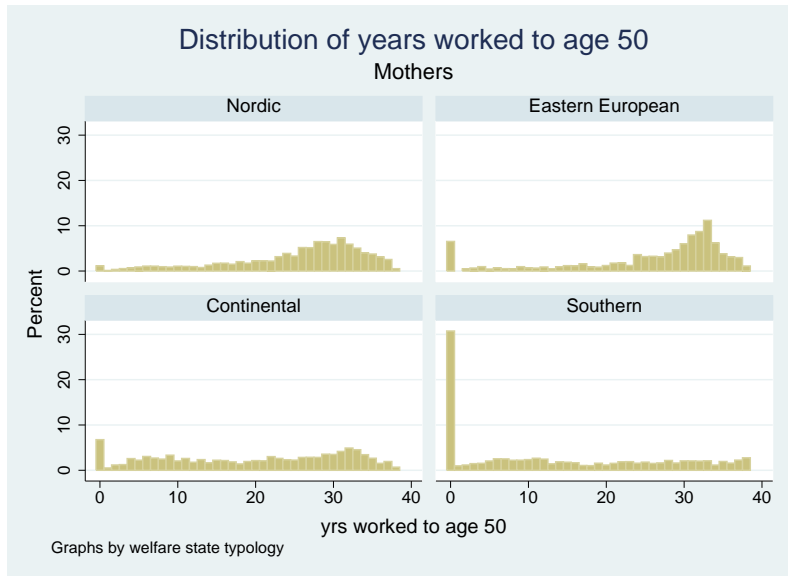
Note: Weighted. Full sample. The indicator shows the total number of years in paid employment up to the age of 50.

Figure 2: Time worked in the presence of young children, by welfare area
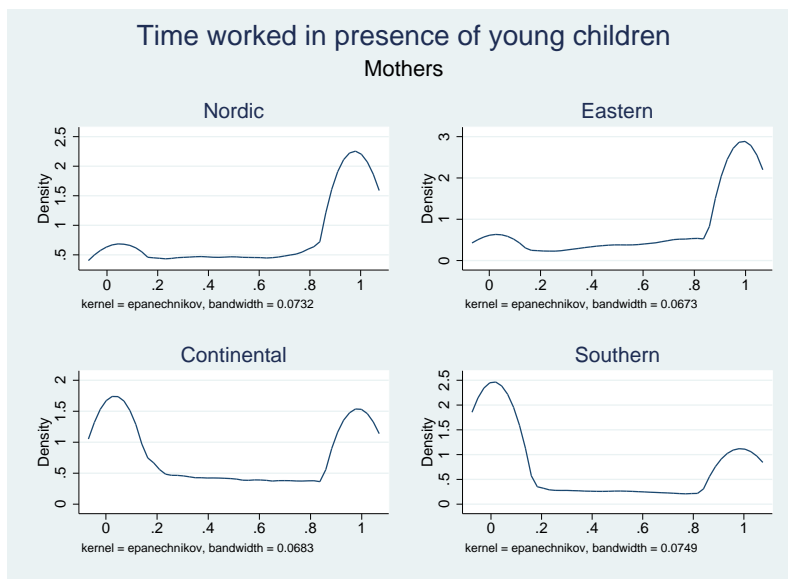
Note: Weighted. Full sample. The indicator expresses the number of years in which a women was in paid employment and had children aged below 10 in the household, as a share of all years with young children in the household.

Within country groups, we find a very high degree of homogeneity in the Nordic welfare states and more variation in the other groups. As we would expect, France has a high share of mothers who pursued continuous employment (44%), whereas the Netherlands are characterised by a much higher incidence of marginal employment than the remaining Continental countries. Among Eastern European countries, Poland stands out with a comparatively high share of homecentred mothers (6.5%) and of women with only marginal employment careers (21.2%). In the Southern European group, Greece has by far the highest share of homecentred mothers (40% against 22% and 23% in Italy and Spain). In spite of this within-group heterogeneity, we find that "outliers" within one group would still not fit well into one of the other clusters, as intra-group differences are less pronounced than inter-group differences. As a case in point, the share of full-career mothers in Poland still lies ten percentage points higher than in France, and the shares of homecentred women in Italy and Spain are higher by a multiple than those in any Continental, Eastern or Northern European country.

When we plot the profile distribution along the birthyear cohorts available in SHARE (Figure 5), we observe a similar combination of convergence and dissimilarity: Younger cohorts display a pronounced tendency of stronger labour market participation, across all welfare areas. The speed of change as well as the prevalence of specific profiles do however vary substantially between country groups. In the Scandinavian countries we observe a strong and steady trend towards more full-career mothers and less women with marginal employment careers. The Eastern Europan countries start with higher levels of female labour force engagement, but experience less change over time. A look at the development within groups (data not displayed here) reveals that the distribution of work-family trajectories evolved rapidly in East Germany (with a strong increase of full-career mothers) and Poland (with a decline in the share of home-centred mothers), but remained virtually

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Figure 3: Distribution of years worked, by work-family profile

Distribution of years worked to age 50
Mothers

Note: Weighted. Full sample. The indicator shows the total number of years in paid employment up to the age of 50.

Figure 4: Time worked in the presence of young children, by work-family profile
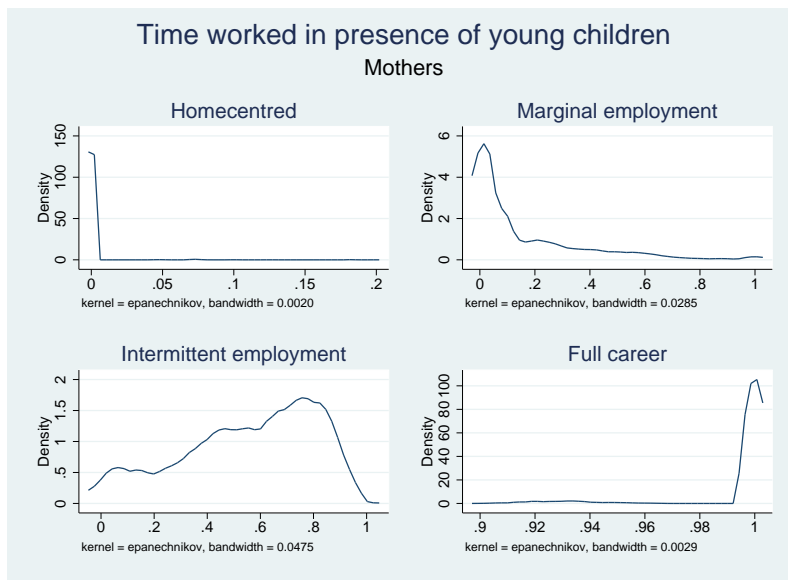
Time worked in presence of young children
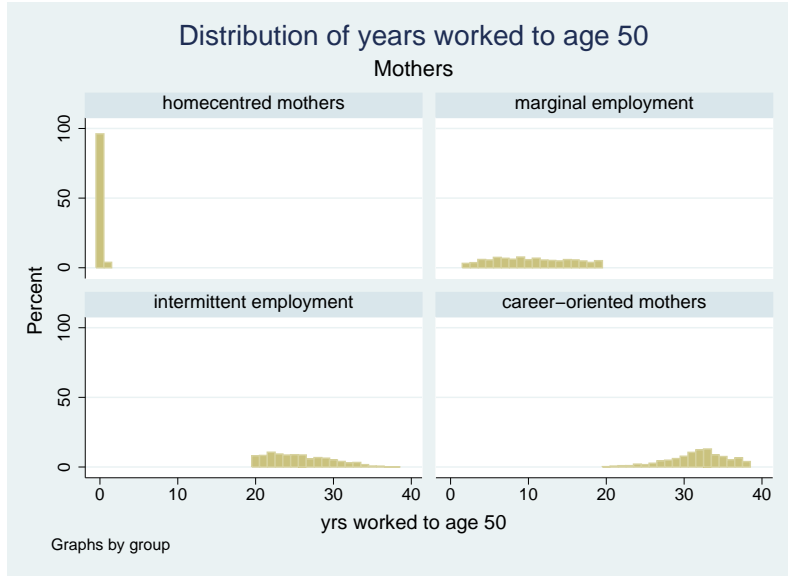Mothers

Note: Weighted. Full sample. The indicator expresses the number of years in which a women was in paid employment and had children aged below 10 in the household, as a share of all years with young children in the household.

Table 1: Distribution of work-family profile, by welfare area and number of children

	Number of children				Total
	1	2	3	>3	
Nordic Europe					
Home-centred	0.8	0.8	2.3	1.6	1.2
Marginal employment	12.3	14.7	26.6	44.6	17.4
Intermittent employment	31.3	35.4	28.1	22.6	32.6
Career-oriented	55.6	49.1	43.0	31.2	48.8
	100	100	100	100	100
Eastern Europe					
home-centred	2.9	3.3	11.9	10.8	5.5
marginal employment	9.9	9.5	18.0	25.6	11.8
intermittent employment	15.8	23.6	19.6	22.3	20.9
career-oriented	71.4	63.6	50.5	41.4	61.8
	100	100	100	100	100
Continental Europe					
home-centred	3.1	4.2	8.6	18.0	5.2
marginal employment	26.3	35.6	45.7	52.0	36.2
intermittent employment	26.4	25.5	22.8	16.8	25.0
career-oriented	44.2	34.6	22.8	13.3	33.6
	100	100	100	100	100
Southern Europe					
home-centred	23.3	29.6	37.5	37.1	30.6
marginal employment	26.5	32.9	34.0	41.1	32.0
intermittent employment	15.8	11.1	9.7	8.5	11.6
career-oriented	34.4	26.5	18.8	13.3	25.8
	100	100	100	100	100

Note: Weighted. Full sample.

Figure 5: Distribution of work-family profile, by birth cohort and welfare area
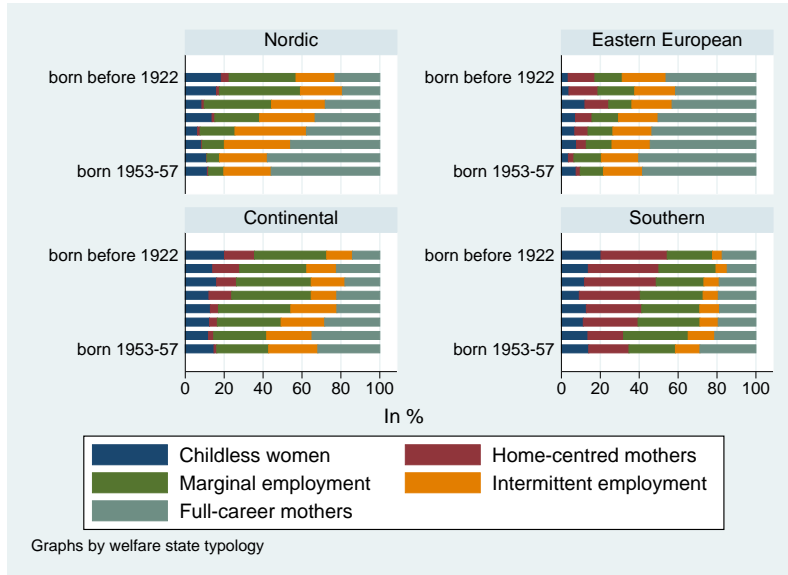
Note: Weighted. Full sample.

unchanged in what is today the Czech Republic. In Southern Europe, we observe only a mild increase in the number of full-career mothers, taking place among the youngest cohorts which are present in the sample. The reduction in the share of homecentred mothers is – on the contrary – pronounced, and can be traced back mainly to developments in Spain and Italy.

Details on the employment trajectories of mothers with different work-family profiles are presented in Table 10 and Table 11 in the Appendix. The literature on female labour force participation stresses that the first child birth is a decisive event for subsequent employment pattern and that cross-national differences in total participation rates are mirrored in differences in employment rates after the birth of the first child (Del Boca and Locatelli, 2006). Indeed, our clustering of family and employment patterns reflects substantial differences in participation behaviour following the birth of the first child, both in terms of likelihood and length of work interruptions. Further differences in the characteristics of women associated with different family and employment profiles come to the fore in the descriptive statistics (mean

and coefficient of variation) collected in Tables 12, 13 and 14 in the Appendix. For convenience, we provide tables only for the more homogeneous sample of younger women (see average age across work-family profiles).

Home-centred mothers are on average older, less educated and live in poorer housholds than those who have combined paid work and motherhood. As we would expect, full-career mothers have on average the highest number of years in paid employment (31.4 years). They are also more educated than women associated with the other profiles, have a higher household income and are more likely to live as single. Women with intermittent careers are very similar to this group in terms of household income as well as age and marital status. In spite of having worked on average less (26.2 years), they did change job more often and experienced more unemployment spells. In addition, they display the highest share of part-time work among all groups, a further indication for the fact that these women have adapted their employment career to their familial needs. When we look at indicators related to children and to household activities, we find larger differences between mothers with no or limited employment histories on the one hand (home-centred and marginal employment), and those with more intensive labour market participation on the other hand (intermittent and full-career). Home-centred mothers and those with only limited labour market experience have on average a larger number of children and were more likely to be – mainly or solely – responsible for household chores and child care. home-centred mothers stand out as those who are least likely to report retrospectively a stress period in their lives (48%). Interestingly, the share of women who report stress periods in concomitance to the time when their children were young does not vary much between mothers with different degrees of employment intensity.

The descriptives on initial conditions (Table 14) suggest that full-career mothers have enjoyed more favourable childhood conditions than their peers: They lived in better accomodations, had parents with more cultural capital, enjoyed a better health status as children and were more likely to have above-average cognitive skills. Childless women are those that show the greatest similarity in terms of initial conditions (with the exception of child-

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hood health) to those who combined family and steady employment. Of the other groups, home-centred women can be singled out as those who had the least favourable environment and starting conditions as children. This finding is not driven by compositional effects due to the uneven distribution of work-family profiles across countries: Descriptive statistics disaggregated by welfare area display exactly the same patterns.[26]

4.2   Determinants of work-family profiles

The next set of results sheds light on the selection of women into different work-family profiles. To provide evidence on the relevance of specific factors in a multivariate setting, we estimate multinomial logit models, using full-career mothers as the base group. The analysis is restricted to women with children. In a first step, we include in our specification only variables related to 'initial conditions'. As we can see from the first, third and fifth columns in Table 2, factors such as cultural capital of parental household, childhood health and cognitive abilities at age 10 have some predictive power with respect to the subsequent selection of women into different combinations of family and employment profiles. This is particularly true for the distinction between full-career mothers and those who had none or only comparatively short careers in paid employment. In line with theoretical expectations, we find that women who combine motherhood with steady employment come from households with more cultural capital, were healthier and had higher cognitive skills as children than women who remained at home or were only marginally employed after starting a family. As indicated by the size of coefficients, the difference between full-career mothers and those with intermittent employment is less accentuated. In this case too, we observe that high cognitive skills are associated with a stronger selection in steady employment, whereas poorer childhood health and housing conditions (which can be interpreted as proxy for SES) increase the likelihood of selection into

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[26]To save space, these tables are not displayed separately, but they are available from the authors upon request.

the intermittent employment profile.[27]

The second specification of our model (columns two, four and six) includes a set of variables that capture the life circumstances of respondents at the moment when they became mothers for the first time. At this stage of their lives, a number of possible outcomes such as the educational level have been realised. Consequently, the explanatory power of the model increases substantially. The additional variables on circumstances at first childbirth are in part substitutive (and not purely complementary) to those on initial conditions: For instance, there exists a positive correlation between SES and cultural capital in parental home on the one side and respondents' educational attainment on the other side. The variable on years of schooling is therefore bound to capture some of the information previously embodied in the indicators for housing quality and cultural capital.

The coefficients on age, partnership status and employment at birth of first child as well as the indicator on years of schooling are all sizeable and highly significant. They indicate that the moment in which women have reached adulthood and start a family represents a crossroad with respect to their future employment career. We observe that the likelihood of staying at home, and also to have a career with only marginal or intermittent employment is significantly higher in cases where a woman was not employed before giving birth to her first child. This finding holds after accounting for the respondents' educational level which, not surprisingly, is positively correlated with a higher degree of labour market integration. Full-career mothers are also more likely to have had their first child later in life than mothers with marginal or intermittent employment (although not with respect to home-centred mothers). Motherhood without a cohabiting partner ('child out of wedlock') is also associated with mothers' continouus employment. This indicates that some women have pursued full-career profiles because they were the only breadwinner in the household.[28]

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[27]Tests with additional explanatory variables such as information on main breadwinner's occupation (based on ISCO nomenclature and grouped to proxy SES) and on the geographical setting (urban vs. rural) yield the same results.

[28]In fact, the share of lone mothers is higher among full-career women than in the other

Table 2: Work-family profile determinants

Multinomial logit model, ref. category: Full-career mothers

	Homecentred		Marginal		Intermittent	
	(1)	(2)	(1)	(2)	(1)	(2)
Birthyear	-0.065***	-0.015	-0.047***	-0.035***	-0.015*	-0.006
Housing index	-0.047	0.01	-0.044	0.005	-0.083***	-0.043
Both parents	-0.038	-0.003	-0.065	-0.081	0.015	-0.019
Good at school	-0.797***	-0.354*	-0.463***	-0.319***	-0.190**	-0.072
Poor childhood health	0.413*	0.746**	0.534***	0.513***	0.300*	0.260*
Number childhood illn.	-0.07	-0.096	-0.037	-0.05	0.02	0.014
Number books	-0.223***	-0.121	-0.089**	0	-0.034	0.046
Yrs schooling		-0.148***		-0.097***		-0.081***
Child out of wedlock		-0.941**		-0.659***		-0.397***
Age first birth		0.064***		-0.032***		-0.052***
Working first birth		-7.403***		-1.490***		-1.345***
Constant	125.006***	30.689	91.572***	71.002***	29.096*	14.699
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Cohort dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	7002	7002	7002	7002	7002	7002
R-sq	0.145	0.259	0.145	0.259	0.145	0.259
LogLi	-7718.1	-6700.2	-7718.1	-6700.2	-7718.1	-6700.2
BIC	15967.5	14037.9	15967.5	14037.9	15967.5	14037.9

To sum up, our results confirm findings from previous research and ex-ante expectations: Advantageous initial conditions, such as good childhood health, above-average cognitive skills and favourable socio-economic background promote a lifecourse profile that combines motherhood with steady employment. As the findings for our second set of indicators show, by the time women have their first child, they have already laid the foundations of their subsequent employment history. To test for the relevance of these associations within welfare typologies, we carry out separate regressions by country group. In a first step, we apply the first specification to the full sample of respondents (see Table 15 in the Appendix) and then we estimate the full specification to our baseline sample (Table 16)[29]. The results confirm the general picture that emerged from the sample with pooled data. None of the welfare areas can be singled out with respect to the others. Due to the reduced sample size, coefficients are in general less statistically significant than for the full sample but – with a few exceptions – have the expected sign and magnitude.

This suggests that personal characteristics and life-course circumstances play a very similar role, irrespective of the welfare state regime in which a person lives. As we can see, the explanatory power of our model for profile selection based exclusively on initial conditions is rather low (Table 15). Not surprisingly, indicators that refer to the situation at the moment of first childbirth, such as attained educational level, age at childbirth, etc., are stronger predictors of the subsequent work-family trajectory. Here too, we find rather similar and homogeneous effects (in terms of coefficient size and magnitude) across country groups (Table 16). In our view, this does however not necessarily indicate that these characteristics and circumstances matter more for the work-family profile choice than institutions and policies related to the welfare state regime. Factors such as the women's educational level and their age and occupational situation at the moment of family formation are in fact not exogenous, but co-determined by national institutions and

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groups, see Table 13.

[29]We omit home-centred mothers from this second step because of the small size of this group in these areas

policies. Although individual characteristics and circumstances have similar effects on the combination of family and employment across different country groups, it is plausible to assume that institutions and policies influence the incidence and distribution of these characteristics and circumstances in the population.

4.3 Health outcomes

4.3.1 Work-family profiles and health status

This final part of our empirical section is dedicated to an exploration of the connex between work-family profiles and subsequent health outcomes. Table 3 shows that in a bivariate setting women associated with the full-career profile are on average healthier than the other groups: They have higher "true health" indexes, are less likely to rate their health as poor and have lower scores on the depression scale.[30] Childless women are those which in terms of health status display the greatest resemblance with full-career mothers (at least with respect to the "true health" index and SRH, not the depression index), whereas home-centred mothers and those with marginal employment careers have on average the lowest health status. As the previous descriptives have shown, however, mothers with steady employment careers tend to live in more affluent households, to be younger and to be better educated than the other groups of women. This raises the question whether the positive relationship between mothers' employment intensity and their health status is in fact capturing the well-documented correlations of health with age, income and education.

In a next step, we test whether the observed bivariate associations between lifecourse profiles up to the age of 50 and subsequent health outcomes are robust to the inclusion of covariates. Table 4 presents an output overview

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[30]Note that the classification into work-family profiles is based on retrospective information provided by respondents in SHARELIFE, i.e. wave 3. Table 3 includes health indicators measured at different points in time (waves 1 to 3), but in all cases at a time when respondents had already reached age 50 and therefore completed the life period on which the profile typology is based.

from linear regressions for the same set of health indicators displayed in the previous table. As after controlling for age, years of schooling, household income and maritals status (as well as country dummies), we can still find a systematic positive link between the intensity of labour market integration of women with children and their subsequent health status.[31] All coefficients for marginal and intermittent employment indicate a negative deviation of these groups from the health status of full-career mothers. With the exception of indicators measured in wave 1 (for which less observations are available and standard errors are large), all coefficients are highly significant. In contrast, differences between home-centred women and full-career mothers in terms of health disappear once we control for age and socio-economic status.

To improve our understanding of the characteristics associated with good health at mature age, we estimate another battery of regressions, including additional explanatory variables and paying particular attention to indicators that describe the household situation and intensity of work and care committments of respondents prior to age 50. Due to the inclusion of an indicator for the intra-household division of tasks (a dummy variable that is set to 1 for women who were mainly or solely responsible for both household chores and childcare), our sample size is now considerably reduced.[32]

After inclusion of this expanded set of covariates, marginal and intermittent employment continue to be associated with inferior health status when compared to full-career mothers. The strength of this link – which is fairly robust as long as we look at the sample with data pooled for all countries – becomes more nuanced once we look at individual welfare types separately. Tables 17 to 19 indicate that the positive association between the extent of mothers' employment and their health status is strongest in the Nordic and Eastern countries, less robust in Continental Europe and hardly detectable in Southern Europe. This indicates that in the Southern countries, where

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[31]Coefficients on age, education and income (not displayed in the table for convenience) have the expected sign and are clearly statistically significant.

[32]The information on which this indicator is based was provided only by a part of respondents in a drop-off questionnaire, see section 3. For this reason, coefficient sizes and post-estimation statistics can not be compared between Table 4 and Table 5.

full-career mothers represent a minority, observable characteristics such as education and income are sufficient to explain the existing difference in health status between groups.

The evidence on the link between intensity of household committments and health is mixed. Some of the indicators suggest that – after controlling for work-family profile – women who faced higher familial committments (measured by the number of children and responsibility for chores and care) display a poorer health status than their peers at later stages in life. The evidence is however not clear-cut. The most robust findings concern the "true health" indicator, where number of children and intensity of household activities show sizeable and statistically significant negative effects. It has to be noted, however, that the negative relationship between the number of children and health might be the result of long-term consequences of childbearing on health.

The existence and duration of stress periods in respondents' lives is associated with inferior health status, although the fact that stress periods coincided with the presence of young children in the household does not seem to represent an aggravating factor for health outcomes.[33] Widowhood and divorce are consistently associated with inferior health outcomes.

4.3.2   Accounting for selection

To sum up the evidence gathered so far, women who have combined family and continuous employment (full-career mothers) display a better health status in mature age than women with marginal or intermittent careers. It is however not clear whether this positive association is the consequence of a selection on (observed and unobserved characteristics) of healthier women into full-career motherhood, or whether combining family and long, steady careers in paid employment is by itself conducive to healthy ageing. The

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[33]Quite to the opposite, results suggest that, once we control for the duration of stress periods, the overlap of stress periods with childcare responsibilities tends to be linked with a positive effect on health. This could be explained by the fact that stress periods that go back to the time when respondents' children were young belong to the more remote past and are of less relevance for health than more recent stress periods.

Table 3: Characteristics of women, by work-family profile - Outcome indicators

Profile	Health index wave2	Health index wave1	Poor SRH wave 3	Poor SRH wave 2	Poor SRH wave 1	Depress scale wave 2	Depress scale wave 1
Childless women							
mean	87.7	86.3	0.32	0.27	0.23	2.5	2.6
cv	0.115	0.125	1.450	1.645	1.845	0.916	0.887
Home-centred moth							
mean	86.6	85.7	0.39	0.34	0.31	2.5	2.8
cv	0.116	0.125	1.261	1.397	1.490	0.978	0.893
Marginal employm							
mean	86.7	85.2	0.39	0.34	0.29	2.7	2.7
cv	0.125	0.137	1.255	1.407	1.581	0.852	0.833
Intermittent emp							
mean	86.8	85.8	0.38	0.32	0.22	2.5	2.5
cv	0.122	0.130	1.289	1.470	1.859	0.883	0.864
Career-oriented							
mean	88.5	87.5	0.31	0.25	0.18	2.3	2.4
cv	0.109	0.119	1.486	1.726	2.113	0.909	0.888
Total							
mean	87.5	86.2	0.35	0.29	0.24	2.5	2.6
cv	0.117	0.128	1.361	1.550	1.795	0.899	0.871

Note: Sample of women in working age at SHARE waves 1 or 2. Unweighted. Health index is scaled 0-100 (where 100=perfect health), SRH is measured as binary variable (0=good, very good or excellent health, 1=1=poor or fair health), and the depression scale is scaled 0-12 (where high=depressed).

Table 4: Health outcomes, specification (1)

Reference category: Full-career mothers

	Health index	Poor SRH wave3	Poor SRH wave2	Poor SRH wave1	Depr. score wave2	Depr. score wave1
Home-centred	-1.755	0.119	-0.411	-0.806	-0.846*	-0.648
	-2.268	-0.508	-0.596	-0.778	-0.486	-0.546
Marginal	-1.763***	0.290***	0.337***	0.261**	0.288***	0.145
	-0.34	-0.077	-0.081	-0.108	-0.073	-0.092
Intermittent	-1.710***	0.258***	0.317***	0.165	0.206***	0.115
	-0.33	-0.074	-0.078	-0.115	-0.071	-0.093
Constant	94.650***	0.889	-0.823	-0.84	3.707***	2.967***
	-2.602	-0.585	-0.608	-0.813	-0.56	-0.702
R-sqr	0.083				0.094	0.069
BIC	42978	7115	6576	3487	24936	14559
N	5787	5777	5783	3372	5740	3354

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Results for Health index and Depression score are based on OLS, those for Poor Self-rated Health on Logit regressions. Other covariates: age, years of schooling, household income and country dummies. Robust standard errors.

Table 5: Health outcomes, specification (2)

Reference category: Full-career mothers

	Health index	Poor SRH wave3	Poor SRH wave2	Poor SRH wave1	Depr. score wave2	Depr. score wave1
Home-centred	-1.639	0.338	-0.951	-0.282	-0.764	-0.238
	-3.406	-0.831	-1.121	-1.154	-0.722	-0.927
Marginal	-1.248***	0.223**	0.289***	0.267*	0.160*	0.026
	-0.44	-0.104	-0.107	-0.138	-0.093	-0.114
Intermittent	-1.390***	0.215**	0.226**	0.12	0.053	0.051
	-0.426	-0.1	-0.105	-0.149	-0.09	-0.116
Poor childhood health	-4.633***	1.092***	0.725***	0.821***	0.563***	0.668***
	-0.673	-0.131	-0.128	-0.165	-0.132	-0.157
Single	1.292**	-0.06	-0.360**	0.123	0.12	0.218
	-0.623	-0.142	-0.142	-0.197	-0.128	-0.164
Divorced/widowed	-2.105***	0.252**	0.287**	-0.057	0.331***	0.245*
	-0.507	-0.126	-0.122	-0.17	-0.107	-0.132
Nr children	-0.423***	0.036	0.01	-0.075	0.01	0.031
	-0.162	-0.038	-0.038	-0.052	-0.034	-0.043
Stress periods	-0.142***	0.029***	0.019**	0.030***	0.039***	0.035***
	-0.033	-0.008	-0.008	-0.01	-0.007	-0.009
Part-time share	0.01	-0.001	0	-0.001	0	0.003**
	-0.006	-0.001	-0.001	-0.002	-0.001	-0.001
Care & chores	-0.712**	-0.039	0.017	0.104	0.325***	0.212**
	-0.344	-0.081	-0.084	-0.115	-0.073	-0.092
R-sqr	0.133				0.138	0.194
N	3410	3449	3446	2209	3428	3437

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Results for Health index and Depression score are based on OLS, those for Poor Self-rated Health on Logit regressions. Other covariates: age, years of schooling, household income, stress periods with young children, and country dummies. Robust standard errors.

results presented in Table 6 are based on the estimation of a multinomial treatment model with the aim to identify the effect of different lifecourse profiles on health, after accounting for the unequal selection into lifecourse trajectories.

The first part of the table shows the output for the selection equations, with a focus on the identifying variables that were not included in the outcome equation. As previously shown (see section 4.2), age and partnership status at first birth are good predictors of subsequent lifecourse trajectories. Their coefficients in the selection equations display the expected signs and magnitudes. Information on partner loss (due to death or separation) when the first child was young, which represents a more exogenous determinant of lifecourse profile selection, is likewise very relevant for identification of the selection process: As we would expect, partner loss leads to a strong drop in the likelihood of mothers to stay at home, and a similar but smaller effect on the probability to pursue only marginal employment. There is no such effect in the selection between intermittent employment and full-career trajectories.

The indicator on disability, which identifies instances in which women suffered from an illness or injury that led to a disability or limited their occupational opportunities in other ways, is of partial relevance for the selection process: we find that health problems or disabilities increased substantially the probability to attain only marginal instead of continuous employment, but the coefficients for the selection into home-centred and intermittent employment trajectories are not statistically significant. This indicates that women with intermittent employment careers chose this path primarily for familial reasons, whereas marginal employment careers could also be the consequence of severe health problems that occurred in adulthood. The coefficients on the generosity of maternity benefits and on the availability of the contraceptive pill (at first childbirth) are of less straightforward interpretation. Maternity benefits do not add to the explanatory power of the selection equations, whereas the availability of the contraceptive pill is associated with a positive effect on the selection into marginal employment and a negative effect on intermittent employment (with respect to the base category, i.e. the

full-career profile).

The outcome equation shows a positive link between the full-career profile and subsequent health, after accounting for selection. The effect is particularly strong in a comparison between full-career mothers and those who had intermittent employment careers. Home-centred mothers do not differ significantly in health from full-career mothers. The effect for mothers with marginal employment careers is less pronounced than for those with intermittent employment. As indicated by the latent factors (λ_1 to λ_3) displayed in the bottom section of the table, there exists some correlated unobserved heterogeneity between the two components of the model (selection and outcome equation).[34] The selection on unobservables, which concerns primarily the marginal and intermittent employment profiles, is however of very limited magnitude. For robustness, we estimate the same model without the 'macro' indicators on maternity benefits and contraceptive. This has the additional advantage to increase sample size (because information on these indicators is missing for Eastern European countries). Results for the outcome equation (displayed in Table 20) confirm the positive effect of full-career trajectories on health.

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[34]The λ's express factor loadings associated with the unobserved characteristics that influence both work-family profile choice and health outcome.

Table 6: Multinomial treatment model: Joint estimation of work-family profiles and "true health" index.

	Selection equation (Profile)		
	Home-centred	Marginal	Intermittent
Poor childhood health	0.502	0.528***	0.160
Yrs schooling	-0.158***	-0.092***	-0.084***
Out of wedlock	-0.792*	-0.627***	-0.404**
Age at first child	-0.109***	-0.089***	-0.078***
Lost partner young	-1.688**	-0.657***	-0.011
Disability	-0.062	-0.537**	0.197
Benefit	0.111	-0.044	-0.008
Contraceptive	-0.070	0.406*	-0.456**
Country dummies	yes	yes	yes

	Outcome equation (Health index)
Treatment: Home-centred	-0.009
Treatment: Marginal	-0.010*
Treatment: Intermittent	-0.015***
Poor childhood health	-0.054***
Yrs schooling	0.005***
Single	-0.014***
Nr children	-0.006***
Stress periods	-0.020***
Disability	-0.085***
Country dummies	Yes
λ_1: Home-centred	0.001
λ_1: Marginal	-0.002*
λ_1: Intermittent	0.004**
N	5147
LogLi	-24613.4
BIC	50107.0

Note: * p<0.10, ** p<0.05, *** p<0.01. Reduced sample size because no information on benefit level and contraceptive pill is available for the Eastern European countries. Further covariates in selection and outcome equations: age, good at school, housing index, number of books, indicator for injury or illness with occupational repercussions. In outcome equation only: household income.

5 Summary and discussion

In this paper, we identify different work-family profiles of European women in their life trajectories up to the age of 50 and examine their possible link with subsequent health outcomes. Based on two indicators - the number of years in paid employment and the number of years with both engagement in paid work and care for a child aged below 10 -, we distinguish between childless women, mothers with hardly any paid work experience (home-centred mothers), mothers with limited work experience (marginal employment), mothers who crafted their work careers around their family obligations (intermittent careers), and mothers who pursued simultaneously family and career (full-career mothers). Home-centred mothers as well as those with marginal work experience have, on average, more children, are less educated and live in poorer households than those with more employment. Mothers with intermittent employment profiles exhibit similarly high levels of education and household income as full-career mothers, but are characterised by a higher number of job changes and unemployment spells, as well as by a higher incidence of part-time employment.

Clearly, the choice of work-family profile is not random. We find that women with favourable initial conditions, such as high socio-economic status of parental home, good childhood health conditions and high cognitive skills, are more likely to reconcile care for their children with continuous employment over the life-course. We estimate multinomial treatment models to account for this selection when analyzing the influence of the work-family profile on subsequent health. Once we control for observable and unobservable characteristics, the statistical difference in health status between full-career mothers and home-centred mothers we observe in a bivariate setting disappears. However, we find that women who combined motherhood with continuous employment are healthier at mature age than those who were only marginally or intermittently employed. The difference is most pronounced when we compare full-career mothers with those who followed an intermittent career-path. This finding is robust to the inclusion of a large number of covariates and suggests that among all mothers who opt for participation in

the labour market a steady employment pattern favours health.

Our analysis covers 13 European countries. We find strong variation in the distribution of work-family profiles across welfare state regimes. There is a general tendency for younger cohorts of European women to combine care for a dependent child with an increasing amount of labour market participation, but the speed and form of change in work-family profiles is far from being homogeneous across country groups. Whereas members of the Southern Europen welfare regime (Italy, Spain, Greece) are characterised by a very strong presence of women who have never been in paid employment, the majority of women with and without children is continuously employed in the Nordic (Sweden, Denmark) and Eastern European regime (Poland, Czech Republic, East Germany). Even in the presence of more than three children, it is very uncommon in Northern Europe to withdraw from the labour market. The defining trait of Continental European welfare states (West Germany, the Netherlands, Belgium, France, Switzerland, and Austria) lies in a comparatively high concentration of women with moderate levels of employment. Among mothers, there is a considerable degree of polarization between a low and a high level of engagement in employment.

The positive link between the extent of mothers' employment up to age 50 and subsequent health seems to be strongest in the Nordic and Eastern European countries. It is weaker in Continental Europe and insignificant for Southern Europe. This result indicates that in Southern Europe, where full-career mothers represent a minority, observable characteristics such as education and income are sufficient to explain the existing differences in health between groups. In the rest of welfare regimes where employment of mothers is much more common, health effects possibly depend on the opportunities to reconcile family with paid work. We find the clearest evidence of a positive nexus between mothers' employment and health for exactly the Northern European countries, in which work-family combination is facilitated most by the institutional context.

Welfare policies and particularly work-family-reconciliation policies have transformed substantially over the past two decades. More specifically, they

have been in a process of being redirected so as to adjust to the needs of mothers and fathers who struggle with the complex task of combining family and career (Bonoli and Natali, 2012; Mätzke and Ostner, 2010). We have witnessed the development of a "growing, even if still somewhat haphazard, infrastructure of supports for women with family responsibilities" (Hegewisch and Gornick, 2011). Such work-family supports include care-related leaves, policies that increase the quality or prevalence of flexible work arrangements and the creation of out-of-home childcare. In particular, we see an increase in policies and incentives to strengthen take-up of leave periods by men and to address the imbalanced gender division of care activities and household tasks. These reforms have not affected (or affected only marginally) the work-family trajectories of the women surveyed in our study. Our findings can however represent useful benchmarks to investigate the career choices and the well-being of younger generations.

Morevoer, in the aftermath of the global financial crisis of 2008, European welfare states experience a "stress test". Policy-makers face considerable increases in fiscal deficits and public debt that prompt them to consider cuts in welfare services (Hemerijck, 2012). Previous research has emphasised the growth potential of child-centered social investment policies as well as their importance for social mobility and social inclusion (Esping-Andersen, 2002). Our findings may be taken as another argument in favour of continuous efforts to expand policies in support of work-family reconciliation even in times of tight budgets. They suggest that circumstances and choices at the time of first birth largely predetermine consequent work trajectories. Hence, this stage of life is crucial for public policy intervention.

We recognise as a limitation of our work the difficulty to fully account for the endogeneity of the work-family profile and thus to properly identify health effects. Additionally, we caution that our findings for women aged at least 50 in the first years of the new millennium cannot necessarily be generalised to younger cohorts. Clearly, more research is needed in this field, also to determine the role played by specific circumstances such as the intra-household division of tasks and other determinants of family-work reconciliation or con-

flict. One possible extension of our work could be an assessment of the role of working conditions as health determinants for the subsample of women who worked most of the time during prime age. SHARE contains information that could be exploited for such research. Furthermore, it would be interesting to shift the focus of analysis from individual women to couples and to examine possible spill-over effects between partners.

References

Bambra, Clare (2004), 'The worlds of welfare: illusory and gender blind?', *Social Policy and Society* **3**(3), 201–211.

Berninger, Ina (2009), 'Welche familienpolitischen Massnahmen fördern die Arbeitsmarktpartizipation von Müttern?', *Kölner Zeitschrift für Soziologie und Sozialpsychologie* **61**(3), 355–385.

Bettio, Francesca and Janneke Plantenga (2004), 'Comparing care regimes in europe', *Feminist Economics* **10**(1), 85–113.

Bock-Schappelwein, Julia, Rainer Eppel and Ulrike Mühlberger (2009), 'Sozialpolitik als Produktivkraft', *Monatsberichte* **82**(11), 845–857.

Bonoli, Giuliano (2007), 'Time matters postindustrialization, new social risks, and welfare state adaptation in advanced industrial democracies', *Comparative Political Studies* **40**(5), 495–520.

Bonoli, Giuliano and David Natali, eds (2012), *The politics of the New Welfare state*, 1. ed. edn, Oxford University Press, Oxford.

Brandt, Martina, Christian Deindl and Karsten Hank (2012), 'Tracing the origins of successful aging: the role of childhood conditions and social inequality in explaining later life health', *Social Science & Medicine (1982)* **74**(9), 1418–1425.

Brugiavini, Agar, Giacomo Pasini and Elisabetta Trevisan (2013), 'The direct impact of maternity benefits on leave taking: Evidence from complete fertility histories', *Advances in Life Course Research* **18**(1), 46–67.

Cipollone, Angela and Carlo D'ippoliti (2011), 'Women's employment: Joining explanations based on individual characteristics and on contextual factors', *American Journal of Economics and Sociology* **70**(3), 756–783.

Crompton, Rosemary (ed.) (1999), *Restructuring Gender Relations and Employment: The Decline of the Male Breadwinner*, Oxford University Press, New York.

Deb, Partha and Pravin K. Trivedi (2006), 'Specification and simulated likelihood estimation of a non-normal treatment-outcome model with selection: application to health care utilization', *The Econometrics Journal* **9**(2), 307–331.

Deb, Partha and Pravin K. Trivedi (2006b), 'Maximum simulated likelihood estimation of a negative binomial regression model with multinomial endogenous treatment', *Stata Journal* **6**(2), 246–255.

Deindl, Christian (2013), 'The influence of living conditions in early life on life satisfaction in old age', *Advances in Life Course Research* **18**(1), 107–114.

Del Boca, Daniela and Marilena Locatelli (2006), The determinants of motherhood and work status: A survey, IZA Discussion Paper 2414, Institute for the Study of Labor (IZA).

Del Boca, Daniela and Marilena Locatelli (2007), Motherhood and participation, *in* D.Del Boca and M.Locatelli, eds, 'Social policies, labour markets and motherhood: a comparative analysis of European countries. Cambridge: Cambridge Univ. Press', pp. 155–181.

Del Boca, Daniela, Silvia Pasqua and Chiara Pronzato (2009), 'Motherhood and market work decisions in institutional context: a european perspective', *Oxford Economic Papers* **61**(Suppl.1).

Del Boca, Daniela, Silvia Pasqua, Chiara Pronzato and Cecile Wetzels (2008), An empirical analysis of the effects of social policies on fertility, labour market participation and hourly wages of european women, *in* D.Del Boca and C.Wetzels, eds, 'Social Policies, Labour Markets and Motherhood', Cambridge University Press, pp. 271–303.

Dowd, Jennifer Beam and Anna Zajacova (2007), 'Does the predictive power of self-rated health for subsequent mortality risk vary by socioeconomic status in the US?', *International Journal of Epidemiology* **36**(6), 1214–1221.

Elman, Cheryl and Angela M. Orand (2004), 'The race is to the swift: Socioeconomic origins, adult education, and wage attainment', *American Journal of Sociology* **110**(1), 123–160.

Esping-Andersen, G(1990), *The Three Worlds of Welfare Capitalism*, Princeton University Press, Cambridge.

Esping-Andersen, G(1999), *Social foundations of postindustrial economies*, Oxford University Press, Oxford; New York.

Esping-Andersen, G(2002), *Why We Need a New Welfare State*, Oxford University Press, Oxford.

Ferraro, Kenneth F. and Jessica A. Kelley-Moore (2003), 'Cumulative disadvantage and health: Long-term consequences of obesity?', *American Sociological Review* **68**(5), 707–729.

Ferrera, Maurizio (1996), 'The 'Southern model' of welfare in social europe', *Journal of European Social Policy* **6**(1), 17–37.

Frech, Adrianne and Sarah Damaske (2012), 'The relationships between mothersâ work pathways and physical and mental health', *Journal of Health and Social Behavior* **53**(4), 396–412.

Goldin, Claudia (2006), 'The quiet revolution that transformed women's employment, education, and family', *American Economic Review* **96**(2), 1–21.

Gornick, Janet C. and Marcia K. Meyers (2004), Welfare regimes in relation to paid work and care, *in* J.Zollinger Giele and E.Holst, eds, 'Changing Life Patterns in Western Industrial Societies', pp. 167–188.

Guo, Jing and Neil Gilbert (2007), 'Welfare state regimes and family policy: a longitudinal analysis', *International Journal of Social Welfare* **16**(4), 307–313.

Haas, Steven A. and Nicholas J. Bishop (2010), 'What do retrospective subjective reports of childhood health capture? evidence from the wisconsin longitudinal study', *Research on Aging* pp. 698–714.

Hakim, Catherine (2000), *Work-Lifestyle Choices in the 21st Century : Preference Theory: Preference Theory*, Oxford University Press, Oxford.

Hamil-Luker, Jenifer and Angela M. O'rand (2007), 'Gender differences in the link between childhood socioeconomic conditions and heart attack risk in adulthood', *Demography* **44**(1), 137–158.

Havari, Enkelejda and Franco Peracchi (2011), Childhood circumstances and adult outcomes: Evidence from world war II, EIEF Working Papers Series 1115, Einaudi Institute for Economic and Finance (EIEF).

Hayward, Mark D. and Bridget K. Gorman (2004), 'The long arm of childhood: The influence of early-life social conditions on menâs mortality', *Demography* **41**(1), 87–107.

Hegewisch, Ariane and Janet Gornick (2011), 'The impact of work-family policies on women's employment: a review of research from OECD countries', *Community, Work & Family* **14**(2), 119–138.

Hemerijck, Anton (2012), 'Retrenchment, redistribution, capacitating welfare provision, and institutional coherence after the eurozone’s austerity reflex', *Sociologica* (1).

Idler, Ellen L. and Yael Benyamini (1997), 'Self-rated health and mortality: A review of twenty-seven community studies', *Journal of Health and Social Behavior* **38**(1), 21.

Janus, Alexander L. (2012), 'The gap between mothersâ WorkâFamily orientations and employment trajectories in 18 OECD countries', *European Sociological Review* .

Jaumotte, Florence (2003), 'Labour force participation of women: Empirical evidence on the role of policy and other determinants in OECD countries', *OECD Economic Studies* pp. 51–108.

Juerges, Hendrik (2007), 'True health vs response styles: exploring cross-country differences in self-reported health', *Health Economics* **16**(2), 163–178.

Kalmijn, Matthijs and Christiaan W. S. Monden (2012), 'The division of labor and depressive symptoms at the couple level effects of equity or specialization?', *Journal of Social and Personal Relationships* **29**(3), 358–374.

Klumb, Petra L. and Thomas Lampert (2004), 'Women, work, and well-being 1950-2000: a review and methodological critique', *Social Science & Medicine* **58**(6), 1007–1024.

Leibfried, Stephan (2000), Towards a european welfare state?, *in* C.Pierson and F. G.Castles, eds, 'The Welfare State Reader', Cambridge, pp. 190–206.

Leitner, Sigrid (2003), 'Varieties of familialism: The caring function of the family in comparative perspective', *European Societies* **5**(4), 353–375.

Lyberaki, Antigone, Platon Tinios and George Papadoudis (2013), 'Retrospective explanation of older women's lifetime work involvement: Individual paths around social norms', *Advances in Life Course Research* **18**(1), 26–45.

Mätzke, Margitta and Ilona Ostner (2010), 'Introduction: change and continuity in recent family policies', *Journal of European Social Policy* **20**(5), 387–398.

Misra, Joya, Michelle J. Budig and Irene Boeckmann (2011), 'Cross-national patterns in individual and household employment and work hours by gender and parenthood', *Research in the Sociology of Work* **22**(1), 169–207.

Muffels, Ruud and Bauke Kemperman (2011), Does a better job match make women happier?, SOEP Papers on Multidisciplinary Panel Data Research 361, DIW Berlin.

Naumann, Ingela K. (2005), 'Child care and feminism in west germany and sweden in the 1960s and 1970s', *Journal of European Social Policy* **15**(1), 47–63.

O'rand, Angela M. and Jenifer Hamil-Luker (2005), 'Processes of cumulative adversity : Childhood disadvantage and increased risk of heart attack across the life course', *The Journals of gerontology. Series B, Psychological sciences and social sciences* **60**, 117–124.

Pascall, Gillian and Jane Lewis (2004), 'Emerging gender regimes and policies for gender equality in a wider europe', *Journal of Social Policy* **33**(3), 373–394.

Pavalko, Eliza K. and Brad Smith (1999), 'The rhythm of work: Health effects of women's work dynamics', *Social Forces* **77**(3), 1141–1162.

Ross, Catherine E. and J. Mirowsky (1995), 'Does employment affect health?', *Journal of health and social behavior* **36**(3), 230–243.

Roxburgh, Susan (2011), 'Parental time pressures and depression among married dual-earner parents', *Journal of Family Issues* .

Sainsbury, Diane (1999), Gender, policy regimes and politics, *in* D.Sainsbury, ed., 'Gender and Welfare State Regimes', Oxford University Press, pp. 245–276.

Schnittker, Jason (2007), 'Working more and feeling better: Women's health, employment, and family life, 1974-2004', *American Sociological Review* **72**(2), 221–238.

Shane, Dan and Pravin Trivedi (2012), What drives differences in health care demand? the role of health insurance and selection bias, Health, Econometrics and Data Group (HEDG) Working Paper 12/09, University of York.

Smith, James P. (2009), Re-constructing childhood health histories, Working Paper 666, RAND Corporation Publications Department.

Stadelmann-Steffen, Isabelle (2008), 'Women, labour, and public policy: Female labour market integration in OECD countries. a comparative perspective', *Journal of Social Policy* **37**(3), 383–408.

Steiber, Nadia and Barbara Haas (2009), 'Ideals or compromises? the attitudeâbehaviour relationship in mothers' employment', *Socio-Economic Review* **7**(4), 639–668.

Sundstrom, Marianne and Frank P. Stafford (1992), 'Female labour force participation, fertility and public policy in sweden', *European Journal of Population / Revue europénne de Démographie* **8**(3), 199–215.

Thevenon, Olivier (2011), 'Family policies in OECD countries: A comparative analysis', *Population and Development Review* **37**(1), 57–87.

Tubeuf, Sandy, Florence Jusot and Damien Bricard (2012), 'Mediating role of education and lifestyles in the relationship between early-life conditions and health: evidence from the 1958 british cohort', *Health economics* **21**(Suppl.1), 129–150.

Uunk, Wilfred, Matthijs Kalmijn and Ruud Muffels (2005), 'The impact of young children on womenâs labour supply a reassessment of institutional effects in europe', *Acta Sociologica* **48**(1), 41–62.

Van der Lippe, Tanja and Liset Van Dijk (2002), 'Comparative research on women's employment', *Annual Review of Sociology* pp. 221–241.

van Doorslaer, Eddy and Ulf G. Gerdtham (2003), 'Does inequality in self-assessed health predict inequality in survival by income? Evidence from Swedish data', *Social Science & Medicine* **57**(9), 1621–1629.

A Methodological notes

A.1 Specification of the multinomial treatment model

Each individual i chooses one treatment from a set of different choices j, implying a multinomial choice model. Let l_{ij} be the latent factor that incorporates unobserved characteristics common to individual $i's$ treatment choice and outcome and d_j be binary variables representing the observed treatment choice. Then the probability of treatment can be represented as:

$$\texttt{Pr}(d_i, |\mathbf{z}_i, \mathbf{l}_i) = g(z'\alpha_1 + \delta_1 l_{i1}, z'\alpha_2 + \delta_2 l_{i2}, ..., z'\alpha_J + \delta_J l_{iJ}) \qquad (1)$$

where g is an appropriate multinomial probability distribution and where z_i denotes exogenous covariates that are predictors of women's work-family profiles. The model first adjusts for the nonrandom selection of women into profiles:

$$\texttt{Pr}(d_i, |\mathbf{z}_i, \mathbf{l}_i) = \frac{exp(z'\alpha_j + \delta_j l_{ij})}{1 + \Sigma_{k=1}^{J} exp(z'\alpha_k + \delta_j l_{ik})} \qquad (2)$$

This equation produces variables λ, which are added to the second-stage regression to adjust for mothers likelihood to enter into different profiles based on observed characteristics. A second stage equation evaluates the relatioships between profiles and health. The expected outcome equation for individual i is:

$$\texttt{E}(y_i|\mathbf{d}_i, \mathbf{x}_i, \mathbf{l}_i) = x'_i\beta_1 + \sum_{j=1}^{J} \gamma_j d_{ij} + \sum_{j=1}^{J} \lambda_j l_{ij} \qquad (3)$$

The health outcome is affected by unobserved characteristics that also affect selection into treatment. When λ_j, the factor-loading parameter, is positive (negative), treatment and outcome are positively (negatively) correlated through unobserved characteristics; i.e., there is positive (negative) selection(Deb and Trivedi, 2006b).

A.2 Computation of the Health index

Juerges (2007) has investigated the reliability of SRH as a "true health" variable in the SHARE dataset, and computed a health measure that is adjusted for cross-cultural biases. The methodology of this computation is based on a decomposition of differences in self-assessed health into parts that are explained by differences in "objective" health indicators and parts not explained by such differences. We are interested in the explained part, which provides synthetic information on individual health status while avoiding the possible biases due to reporting differences between countries, cultural areas and socio-economic population groups.

Following Juerges (2007), we construct a 0 to 100 health index that describes as accurately as possible the whole spectrum of health states, from "near death" to "perfect health". Health states between near death and perfect health are given an index value between 0 and 100. The presence of a condition reduces the health index by some given amount or percentage, the so-called disability weight. The disability weight of each condition or symptom is assumed to be the same for each respondent.

Disability weights are computed from within the sample by estimating generalised ordered probit regressions of self-reported health (SRH) on a set of health variables. In SHARE waves 1 and 2 respondents were asked about the presence of chronic conditions diagnosed by doctors (heart disease, cholesterol, stroke, diabetes, lung disease, asthma, arthritis, osteoporosis, cancer, cataracts and fractures) as well as symptoms such as pain, breathlessness and sleeping problems. These informations, together with information on (medically treated) depressions and measures for grip strength, walking speed and the BMI (derived from self-reported height and weight) are used as explanatory variables. In the generalised ordered probit model, thresholds are modelled with country dummies to account for country-specific reporting styles. While thresholds are allowed to vary across countries, disability weights are constrained to be the same in each country.

The health index is computed as the linear prediction from the ordered

probit regression (the latent variable), normalised to 0 for the worst observed health state and 100 for the best observed health state.

Figure 6: Distribution of Health index
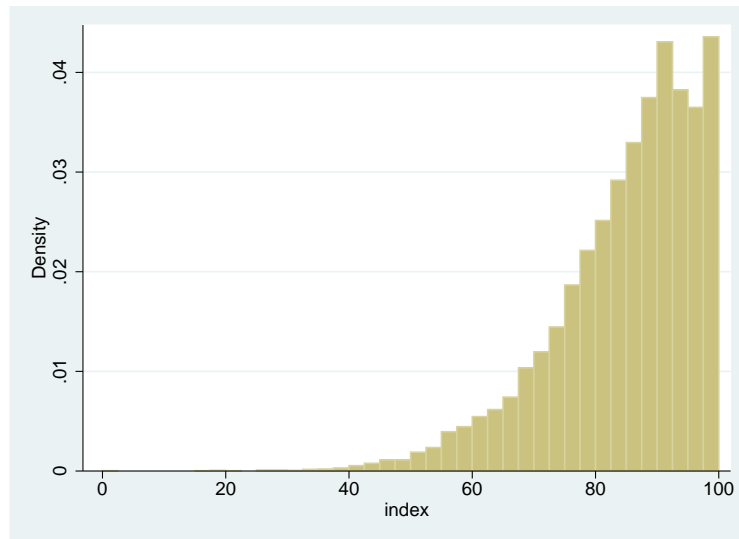
Note: Weighted. Sample restricted to women who were aged 50 to 65 when first surveyed by SHARE.

B Figures and Tables

Table 7: Sample descriptives (means)

	Age (wave3)	Years school	Single (wave3)	Years work	Number jobs	Share parttime	Number children	Age at 1st birth	Frequency N	%
Sweden	61.6	11.8	34.3	27.3	4.0	22.7	2.0	25.0	591	7.3
Denmark	59.7	13.4	27.6	26.8	4.6	20.1	2.0	24.3	666	8.2
Czechia	59.7	12.2	37.1	31.0	3.2	2.7	2.0	24.4	627	7.8
Poland	58.7	10.2	36.7	23.9	2.2	2.7	2.5	22.9	598	7.4
East Germany	60.2	13.8	36.2	29.7	3.7	12.1	2.0	22.5	147	1.8
France	61.0	10.2	29.8	22.2	2.6	14.1	2.2	24.6	739	9.1
Austria	62.7	10.4	41.2	22.4	2.4	14.7	2.1	23.4	239	3.0
West Germany	60.1	13.3	29.6	22.7	2.7	28.2	1.9	25.1	454	5.6
Netherlands	61.1	11.5	30.9	19.4	3.2	36.8	2.1	25.1	742	9.2
Switzerland	59.9	11.6	32.4	21.3	3.9	35.2	1.9	25.8	396	4.9
Belgium	60.3	10.6	28.2	22.2	2.2	15.4	2.1	24.4	804	9.9
Spain	61.3	7.7	26.3	14.4	1.4	8.0	2.5	24.8	469	5.8
Italy	61.2	7.9	25.1	17.0	1.5	10.7	2.0	24.7	764	9.4
Greece	60.0	9.7	34.4	13.8	0.9	5.7	1.7	25.6	853	10.6
Nordic	60.6	12.6	30.8	27.1	4.3	21.3	2.0	24.6	1,257	15.5
Eastern European	59.3	11.4	36.7	26.6	2.8	5.2	2.3	23.1	1,372	17.0
Continental	60.7	11.3	30.3	22.1	2.7	20.9	2.1	24.8	3,374	41.7
Southern	61.0	8.1	27.2	15.6	1.4	9.0	2.1	24.9	2,086	25.8
Total	60.5	10.5	30.7	21.5	2.5	15.3	2.1	24.5	8,089	100

Note: Weighted (with exception of the last two columns, that show sample composition). Sample restricted to women who were age 50 to 65 when first surveyed by SHARE. Values for share of singles and part-time share expressed in percent, the others in respective units.

Table 8: Sample descriptives (means) - part II

	Health index	Health index(W1)	Health index(W2)	Poor SRH(W3)	Poor SRH(W2)	Poor SRH(W1)	Depress score(W2)	Depress score(W1)	Frequency N	%
Sweden	88.2	88.6	86.2	32.7	24.4	10.6	2.0	2.2	591	7.3
Denmark	88.0	88.0	86.4	28.0	20.7	19.2	2.0	2.0	666	8.2
Czechia	85.4	85.4	.	37.2	31.9	.	2.1	.	627	7.8
Poland	83.1	83.1	.	59.9	53.4	.	4.0	.	598	7.4
East Germany	88.2	88.3	86.1	47.6	26.2	29.9	2.2	2.1	147	1.8
France	86.4	86.3	85.7	31.2	25.9	23.6	3.3	3.2	739	9.1
Austria	87.1	87.3	85.7	40.1	26.4	23.2	2.0	2.2	239	3.0
West Germany	88.5	88.6	86.5	36.2	30.9	31.7	2.3	2.4	454	5.6
Netherlands	88.4	88.5	87.8	32.4	28.8	23.5	2.2	2.3	742	9.2
Switzerland	91.4	91.3	90.6	18.0	13.3	13.4	2.1	2.2	396	4.9
Belgium	87.7	87.8	85.7	29.5	24.0	21.2	2.7	2.7	804	9.9
Spain	84.4	84.5	81.9	53.8	44.8	39.5	3.3	3.5	469	5.8
Italy	86.4	86.5	84.2	43.5	41.8	38.3	2.9	3.1	764	9.4
Greece	89.3	89.3	87.9	22.1	16.9	20.7	1.9	2.4	853	10.6
Nordic	88.1	88.3	86.3	30.2	22.3	13.9	2.0	2.2	1,257	15.5
Eastern European	84.8	84.8	86.1	52.7	42.7	29.9	3.2	2.1	1,372	17.0
Continental	87.4	87.4	86.2	32.5	27.0	25.4	2.8	2.7	3,374	41.7
Southern	86.3	86.5	84.1	42.6	38.1	35.6	2.8	3.1	2,086	25.8
Total	86.7	86.7	85.5	38.8	32.8	28.2	2.8	2.8	8,089	100.0

Note: Weighted (with exception of the last two columns, that show sample composition). Sample restricted to women who were age 50 to 65 when first surveyed by SHARE. Health index expressed on a scale from 0 to 100, depression score on a scale from 0 to 12 and poor SRH as percentage of respondents who rated their health only "fair" or "poor".

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Figure 7: Distribution of years worked, by welfare area.

Distribution of years worked to age 50
Mothers
Graphs by welfare state typology
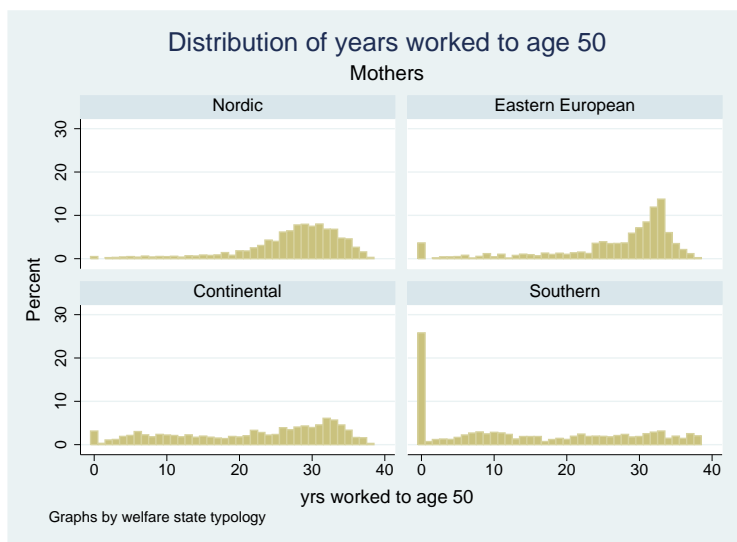
Note: Weighted. Sample restricted to women who were age 50 to 65 when first surveyed by SHARE.

Figure 8: Time worked in presence of young children, by welfare area.

Time worked in presence of young children
Mothers
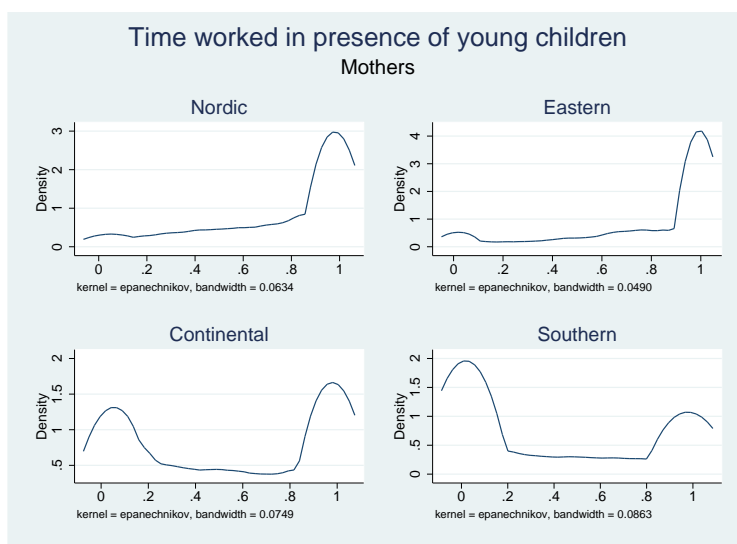
Note: Weighted. Sample restricted to women who were age 50 to 65 when first surveyed by SHARE.

Table 9: Female labour force participation rates (Population 15-64)

	ø 60/67	ø 68/73	ø 74/79	ø 80/86
Austria	52.1	50.5	53.9	53.5
Belgium	37.8	40.8	45.3	49.7
Denmark	48.1	58.9	65.1	73.5
France	46.5	48.6	52.4	54.7
West Germany	48.9	48.4	49.5	50.1
Greece	38.6	32.1	33.0	38.7
Italy	36.4	33.5	36.5	40.5
Netherlands	26.6	28.3	31.7	39.3
Spain	27.1	29.2	32.5	32.7
Sweden	53.5	59.9	69.2	76.4
Switzerland	52.1	52.6	52.3	53.7

Note: Historical Statistics 1960-1986, OECD 1988. Value for Denmark 74/79 originally missing in the OECD publication, amended on the basis of OECD data from more recent publications. No data available for Eastern European countries.

Table 10: Employment decision after birth of first child, by work-family profile

| | Interruption after birth of first child? | | | | |
Full sample	Stopped temporarily	Not worked again	No inter-ruption	No work before child	Total
Home-centred mothers	3.5	3.0	5.7	87.7	100
Marginal employment	22.5	18.4	9.7	49.4	100
Intermittent employment	53.2	5.0	12.7	29.0	100
Full-career mothers	59.7	0.5	35.2	4.6	100
Total	39.6	7.2	18.9	34.4	100

| | Interruption after birth of first child? | | | | |
Age 50-65	Stopped temporarily	Not worked again	No inter-ruption	No work before child	Total
Home-centred mothers	4.0	2.7	4.7	88.6	100
Marginal employment	25.2	20.5	11.0	43.3	100
Intermittent employment	57.2	4.9	12.2	25.7	100
Full-career mothers	62.9	0.6	32.5	4.0	100
Total	45.7	7.1	19.4	27.8	100

Note: Weighted. Full sample. Respondents were asked the following question: Did you temporarily or permanently stop working when the child was born?

Table 11: Duration of leave after first child birth

Full sample	Length of work interruption after birth of first child				
	1-3 mth	3 mth-1 yr	1-3 yrs	>3 yrs	Total
Marginal employment	15.7	22.1	9.4	52.8	100
Intermittent employment	13.9	20.0	19.1	47.0	100
Full-career mothers	32.8	43.5	16.0	7.6	100
Total	24.7	33.3	15.6	26.4	100

Age 50-65	Length of work interruption after birth of first child				
	1-3 mth	3 mth-1 yr	1-3 yrs	>3 yrs	Total
Marginal employment	14.1	24.6	8.7	52.6	100
Intermittent employment	12.8	20.2	19.7	47.3	100
Full-career mothers	30.6	44.5	17.1	7.9	100
Total	23.1	34.6	16.5	25.7	100

Note: Sample consists of those women who said that they stopped to work temporarily after the birth of their first child. home-centred mothers are not displayed because of their small number in this subsample.

Table 12: Characteristics of women, by work-family profile - Socio-economic indicators

Profile	age (wave3)	years school-ing	HH income (log)	marital status (1=single)	years worked to age 50	number of jobs	number unempl spells	share parttime work
childless women								
mean	60.3	11.3	9.91	0.50	23.38	2.5	0.15	9.9
cv	0.082	0.368	0.118	0.993	0.498	0.915	2.538	2.314
home-centred moth								
mean	61.4	7.8	9.46	0.21	0.03	0.1	0.03	27.3
cv	0.078	0.489	0.127	1.922	5.848	4.226	6.004	1.671
marginal employm								
mean	61.2	9.8	9.91	0.20	10.76	2.1	0.08	17.5
cv	0.078	0.410	0.097	1.996	0.456	0.682	3.245	1.775
intermittent emp								
mean	60.6	10.8	10.05	0.27	26.20	3.9	0.22	28.4
cv	0.081	0.356	0.088	1.647	0.150	0.597	2.085	1.191
career-oriented								
mean	59.9	11.8	10.08	0.30	31.42	2.8	0.15	12.2
cv	0.079	0.311	0.090	1.522	0.110	0.746	2.645	2.105
Total								
mean	60.5	10.7	9.97	0.29	21.83	2.6	0.14	17.0
cv	0.080	0.376	0.099	1.583	0.535	0.839	2.700	1.748

Note: Sample of women in working age at SHARE waves 1 or 2. Weighted.

Table 13: Characteristics of women, by work-family profile - Child-related indicators

Profile	number of children	age at 1st birth	chores & care (1=alone)	lost partner (1=yes)	lone mother (1=yes)	stress period (1=yes)	stress with child (1=yes)
childless women							
mean	.	.	.	.	.	0.60	.
cv	.	.	.	.	.	0.891	.
home-centred moth							
mean	2.6	24.2	0.57	0.02	0.02	0.48	0.13
cv	0.539	0.186	0.871	7.937	6.557	1.167	2.645
marginal employm							
mean	2.6	24.3	0.53	0.05	0.04	0.63	0.24
cv	0.485	0.173	0.940	4.264	4.983	0.865	1.774
intermittent emp							
mean	2.3	23.8	0.46	0.09	0.06	0.69	0.25
cv	0.467	0.192	1.092	3.091	4.137	0.754	1.803
career-oriented							
mean	2.1	25.2	0.36	0.08	0.06	0.65	0.27
cv	0.433	0.181	1.330	3.282	3.877	0.806	1.799
Total							
mean	2.1	24.6	0.45	0.06	0.05	0.63	0.22
cv	0.622	0.183	1.115	3.835	4.333	0.845	1.991

Note: Sample of women in working age at SHARE waves 1 or 2. Weighted.

Table 14: Characteristics of women, by work-family profile - Initial conditions

Profile	persons per room	housing index (0-5)	both parents (1=no)	poor health in childhood	number childhood illnesses	number books (1-5)	good at school (1=yes)
childless women							
mean	1.77	2.57	0.07	0.13	1.06	2.38	0.53
cv	0.753	0.669	3.693	2.558	0.678	0.547	0.938
home-centred moth							
mean	2.2	1.4	0.07	0.07	0.92	1.52	0.3
cv	0.650	1.053	3.616	3.567	0.676	0.569	1.603
marginal employm							
mean	1.9	2.1	0.10	0.11	1.02	2.00	0.4
cv	0.695	0.812	3.023	2.794	0.588	0.574	1.186
intermittent emp							
mean	1.9	2.4	0.11	0.10	1.07	2.15	0.5
cv	0.721	0.729	2.794	3.058	0.540	0.537	0.972
career-oriented							
mean	1.8	2.5	0.10	0.07	1.05	2.34	0.6
cv	0.674	0.720	2.922	3.709	0.549	0.499	0.882
Total							
mean	1.9	2.3	0.10	0.09	1.04	2.15	0.5
cv	0.696	0.768	3.031	3.145	0.583	0.549	1.021

Note: Sample of women in working age at SHARE waves 1 or 2. Weighted.

Table 15: Determinants of work-family profile, by welfare state group. Specification (1)

Multinomial logit, Ref. cat.: Full-career mothers

	Nordic	Eastern	Continental	Southern
Home-centred				
Birthyear	-0.077**	-0.058***	-0.086***	-0.016**
Housing index	-0.564**	-0.15	-0.106*	0.009
Both parents	-0.277	0.07	-0.438*	-0.272
Good at school	-0.758	-0.590*	-0.558***	-0.766***
Poor childhood health	-0.226	-0.116	0.225	-0.073
Nr books	0.045	-0.376*	-0.04	-0.174*
Constant	146.1**	109.2***	166.1***	31.4***
Marginal employment				
Birthyear	-0.089***	-0.009	-0.043***	0.009
Housing index	-0.041	-0.214**	-0.056*	-0.04
Both parents	-0.117	0.632**	-0.173	0.01
Good at school	-0.442**	-0.616***	-0.313***	-0.305**
Poor childhood health	0.561*	0.604*	0.395**	0.043
Nr books	-0.063	0.06	-0.033	-0.082
Constant	172.2***	14.1	166.1***	-16.7
Intermittent employment				
Birthyear	-0.028***	-0.004	-0.005	0.023**
Housing index	-0.047	-0.104*	-0.081**	-0.029
Both parents	-0.07	0.063	0.087	-0.105
Good at school	-0.171	-0.309**	-0.143	0.021
Poor childhood health	0.616**	0.334	0.368**	-0.112
Nr books	-0.076	0.087	0.002	-0.183*
Constant	54.3***	7.5	9.7	-45.6
N	1883	2071	4951	3392
Ps R-sqr	0.0673	0.0941	0.0614	0.0384
LogLi	-1890.3	-1907	-5820	-4275.9
BIC	3961.6	4020.1	11946.2	8771.4

Note: * p<0.10, ** p<0.05, *** p<0.01. Full sample.

Table 16: Determinants of work-family profile, by welfare state group. Specification (2)

Multinomial logit, Ref. cat.: Full-career mothers

	Nordic	Eastern	Continental	Southern
Home-centred				
Birthyear	.	.	-0.084**	0.037
Housing index	.	.	-0.151	0.134
Both parents	.	.	-0.053	-0.13
Good at school	.	.	-0.168	-0.353
Poor childhood health	.	.	1.083**	-0.067
Childhood illnesses	.	.	0.111	0.125
Nr books	.	.	0.069	-0.242
Yrs school	.	.	-0.137***	-0.154***
Out of wedlock	.	.	-2.035**	0.182
Age at first child	.	.	0.063	0.052*
Work before first birth	.	.	-7.479***	-7.717***
Constant	.	.	164.6**	-68.0
Marginal employment				
Birthyear	-0.067**	0.047	-0.059***	0.008
Housing index	-0.017	-0.167	0.001	0.05
Both parents	0.008	0.838**	-0.22	-0.186
Good at school	-0.369	-0.645**	-0.276**	-0.267
Poor childhood health	1.375***	0.634	0.379*	0.08
Childhood illnesses	-0.09	-0.183	-0.064	0.137
Nr books	-0.058	0.025	0.028	0.016
Yrs school	-0.149***	-0.019	-0.096***	-0.112***
Out of wedlock	-0.917**	-0.174	-0.428*	-0.969*
Age at first child	-0.068*	-0.01	-0.049***	-0.008
Work before first birth	-1.860***	-1.872***	-1.233***	-1.785***
Constant	134.6**	-91.4	119.2***	-12.8
Intermittent employment				
Birthyear	-0.057***	0.027	-0.015	0.025
Housing index	-0.051	-0.139*	-0.032	0.056
Both parents	-0.101	0.051	0.072	-0.357
Good at school	0.024	-0.293	-0.078	0.114
Poor childhood health	0.552	0.34	0.152	-0.054
Childhood illnesses	-0.114	-0.036	0.072	0.072
Nr books	0.029	0.153	0.074	-0.173
Yrs school	-0.086**	-0.077*	-0.091***	-0.041
Out of wedlock	-0.175	-0.169	-0.355	-1.034
Age at first child	-0.129***	0.032	-0.054***	-0.059**
Work before first birth	-0.703**	-2.052***	-1.075***	-1.856***
Constant	115.6***	-51.3	31.5	-46.4
N	1107	1234	2838	1780
Ps R-sqr	0.107	0.139	0.144	0.282
LogLi	-925.3	-884.8	-2927.4	-1701.7
BIC	2032.9	1969	6260.3	3717.7

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Category for home-centred mothers omitted for Northern and Eastern European countries due to small number of observations.

Table 17: Health outcomes, results by welfare area

Reference category: Full-career mothers
Dependent variable: Health index

	Nordic	Eastern	Continental	Southern
Home-centred	-0.178	-1.492	-1.63	-0.027
	-6.426	-1.842	-1.024	-0.68
Marginal employment	-2.925***	-2.350**	-1.052**	-0.739
	-0.984	-1.092	-0.472	-0.636
Intermittent employment	-1.768***	-2.350***	-1.063**	-0.512
	-0.644	-0.774	-0.5	-0.813
R-sqr	0.12	0.122	0.106	0.147
BIC	7450	9645	19058	11464
N	1018	1260	2591	1562

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Other covariates: age, years of schooling, household income, poor childhood health, marital status, lost partner, stress period, stress period with children, number of children and country dummies.

Table 18: Health outcomes, results by welfare area

Reference category: Full-career mothers
Dependent variable: Poor SRH in wave 3

	Nordic	Eastern	Continental	Southern
Home-centred	.	0.12	0.411*	0.03
	(.)	-0.372	-0.236	-0.165
Marginal employment	0.908***	0.402*	0.247**	-0.08
	-0.238	-0.22	-0.115	-0.155
Intermittent employment	0.443***	0.179	0.125	0.256
	-0.164	-0.152	-0.123	-0.193
BIC	1210	1706	3147	1971
N	1031	1270	2625	1590

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Other covariates: age, years of schooling, household income, poor childhood health, marital status, lost partner, stress period, stress period with children, number of children and country dummies.

Table 19: Health outcomes, results by welfare area

Reference category: Full-career mothers
Dependent variable: EURO-D depression score

	Nordic	Eastern	Continental	Southern
Home-centred	-2.253*	1.104***	0.124	-0.013
	-1.269	-0.369	-0.225	-0.166
Marginal employment	0.588***	0.538**	0.083	0.266*
	-0.195	-0.219	-0.103	-0.155
Intermittent employment	0.206	0.175	0.043	0.278
	-0.126	-0.155	-0.109	-0.200
BIC	1210	1706	3147	1971
N	1031	1270	2625	1590

Note: * p<0.10, ** p<0.05, *** p<0.01. Sample of women in working age at SHARE waves 1 or 2. Other covariates: age, years of schooling, household income, poor childhood health, marital status, lost partner, stress period, stress period with children, number of children and country dummies.

Table 20: Multinomial treatment model: Robustness.

	Outcome equation (Health index)
Treatment: home-centred	-0.012*
Treatment: Marginal	-0.011**
Treatment: Intermittent	-0.017***
λ_1: home-centred	0.001
λ_1: Marginal	-0.001
λ_1: Intermittent	0.002
N	6.337
LogLi	-30293.4
BIC	61505.9

Note: * p<0.10, ** p<0.05, *** p<0.01. Outcomes for selection equations and for covariates in outcome equation not shown. Same specification for selection and outcome equations as in Table 6, with exclusion of maternity benefit and contraceptive pill. Sample with all countries, women in working age at SHARE waves 1 or 2.

Project Information

Welfare, Wealth and Work for Europe

A European research consortium is working on the analytical foundations for a socio-ecological transition

Abstract

Europe needs a change: The financial crisis has exposed long neglected deficiencies in the present growth path, most visibly in unemployment and public debt. At the same time Europe has to cope with new challenges ranging from globalisation and demographic shifts to new technologies and ecological challenges. Under the title of Welfare, Wealth and Work for Europe – WWWforEurope – a European research consortium is laying the analytical foundations for a new development strategy that enables a socio-ecological transition to high levels of employment, social inclusion, gender equity and environmental sustainability. The four year research project within the 7th Framework Programme funded by the European Commission started in April 2012. The consortium brings together researchers from 33 scientific institutions in 12 European countries and is coordinated by the Austrian Institute of Economic Research (WIFO). Project coordinator is Karl Aiginger, director of WIFO.

For details on WWWforEurope see: www.foreurope.eu

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